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PERFORMANCE BUDGETING IN GOVERNMENT

(An Illustrative Guide)

S. S. VISWANATHAN

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Foreword

In the context of the large increase in the size and magnitude of governmental activities over the past two decades, their increasing complexity and the consequent new role of Government in their management, modern methods and techniques of project and financial management have become necessary to ensure efficient utilisation of resources. In the field of budgeting also, the need has been felt for a system which will focus attention on what the Government is doing in terms of their programmes, activities and projects, their costs and quantitative data, reflecting planned tasks and their performance in both financial and physical terms. Recognising the deficiencies of our present budgetary structure which fails to adequately link financial outlay to physical achievements, the Administrative Reforms Commission, in its Report on 'Finance, Accounts and Audit', had recommended the introduction of performance budgeting, a technique which has been hailed as the management's approach to budgeting and financial control.

The Commission had, *inter-alia*, stressed the need for suitable training programmes for all concerned. The Indian Institute of Public Administration has been rendering useful service in the field of training and a large number of senior and middle level officers in the Central and State Governments and Public Sector Undertakings have already been trained. Besides research studies and consultancy, this programme will continue as part of the Institute's efforts in this area in supplementing the work of the Ministry of Finance.

The need for a comprehensive and practical guide on Performance Budgeting has been felt for quite some time now, both in the context of providing proper reading material to the trainees and in facilitating a clear understanding of the subject among the concerned Government officials for practical application in their respective organisations. In fact, the absence of such a handbook has proved to be a major limiting factor in the adoption of this new technique. The Administrative Reforms Commission had envisaged that the Finance Ministry would prepare a practical Manual on Performance Budgeting. Since, however, the Indian Institute of Public Administration has been assisting the Finance Ministry in its efforts towords performance budgeting, this job was undertaken by us on a modest scale.

Obviously, in a first attempt of this nature, there were bound to be some inadequacies. Comments and suggestions were, therefore, invited from Central Ministries/Departments as well as State Governments. In the light of certain suggestions received and on a critical re-examination done, the mimeographed volume circulated in March 1972 has now been revised. I am sure that this Volume, which has a practical bias, will be found useful both by the training participants and all those in Government who are engaged in applying the technique. Another volume dealing exclusively with the application of performance budgeting in the public sector undertakings is also proposed to be brought out in due course.

We are grateful to all those who have helped us in this venture for their cooperation and valuable suggestions.

GOPESHWAR NATH
Director
INDIAN INSTITUTE OF PUBLIC ADMINISTRATION

SEPTEMBER 2, 1972
NEW DELHI

Preface

The Government of India have accepted the recommendation of the Administrative Reforms Commission that the departments and organisations, both at the Centre and in the States, which are in direct charge of development programmes, should introduce performance budgeting. This was a milestone in the budgetary history of our country. Some of the State Governments have also accepted this. Today, as a first step in that direction, performance budget documents of a number of Ministries and Departments/Organisations at the Centre and selected departments and units in the States are being presented to the Parliament/State Legislatures as a post-budget supplementary exercise, pending the required changes in the accounting and budgetary structure as well as improvements in the financial management practices.

There is, however, a long way to go before we can realise the advantages of performance budgeting as a tool for management in the control and monitoring of the programmes and projects. A number of issues have to be sorted out and suitable changes or improvements considered in our system of financial management and control. Elaborate training efforts are also needed to educate and motivate all those who, at different levels, will be concerned with the development of performance budgeting. Useful work in this area is being done by the Indian Institute of Public Administration and the Institute of Secretariat Training and Management.

Apart from training which has to continue on an intensive and extensive scale, there is a long felt need for a proper manual or guide to serve as training material and also to facilitate a clear understanding of the subject in all its ramifications. This required the gaining of some experience and could not, therefore, be undertaken so long. For over a year now, I have been feeling that this work could not, perhaps be delayed any further. This Volume, an illustrative guide, is my humble attempt to meet the needs of the situation at the earliest. Every effort has been made to cover the important aspects of the technique with suitable illustrations.

A mimeographed volume on the subject was earlier circulated among Central Ministries/Departments and State Governments for their reaction. It is gratifying to

note that there is widespread demand for such a book. I am grateful to all those departments at the Centre and the States for their valuable suggestions and encouragement. I have reviewed the earlier work to make it more comprehensive and practical. If complete information regarding performance budgeting efforts in all the States were available, this Volume could have highlighted the actual problems being experienced, though I have tried to cover the major issues, as far as I can see. Performance budget documents of all those States who have made a beginning were also not available, though called for. That would have enabled me to draw upon more representative material to serve as illustrations.

In writing this Volume, I have been greatly benefited by the pioneering works of Shri A. Premchand, an old friend and colleague of mine, now with the World Bank Organisation. His book on 'Performance Budgeting' is the only book of its kind written in the Indian background. I am also grateful to the Director and my colleagues in the Institute and the Ministry of Finance for their cooperation and help. I am aware that this work could be improved upon and shall be grateful if deficiencies or mistakes are brought to my notice.

AUGUST 10, 1972
NEW DELHI

S. S. VISWANATHAN

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1

Introduction

The budgetary system in India, as in many other countries, has been designed and developed from time to time mainly to facilitate financial and legal accountability of the Executive to the Legislature, and within the Executive, observance of similar accountability on the part of each subordinate agency. The chief objective sought to be achieved was to ensure that funds are raised and money is spent by the Executive in accordance with and within the limits of legislative sanctions and authorisations. Accordingly, the budgets are formulated and presented with a pre-dominant bias for the objects of expenditure and the departments or organisations which incur them. Thus, it is usual to see in a budget document, broad heads of expenditure such as pay of officers, pay of establishment, allowances and honoraria, contingencies, other charges, grant-in-aid, subsidies, etc. against various departments and subordinate organisations. The 'conventional' budget of this type, with its object or line-item classification, primarily reveals *what* Government purchases, but not *why*; it brings out what the Government *buys*; but not what the Government *does*. In other words, the concern about financial accountability is the overriding consideration which permeates the entire budgetary process. The budgets, therefore, emphasise the financial aspects and do not properly inter-relate financial outlays with physical programme and achievements.

DEFICIENCIES OF THE PRESENT SYSTEM

In its present form, the conventional budget suffers from a number of shortcomings, of which four arise mainly out of the system of classification :

(*a*) the classification does not serve as an adequate base for informed decision making at each level of management. It does not help management to control and appraise performance of the various programmes, projects, activities and schemes (Programme and activity classification is suggested to remedy this);

(*b*) it is difficult to see from the existing budget and account heads for what broad purposes and objectives resources are being allocated (Functional classification is suggested to remedy this);

(*c*) The classification does not permit a proper analysis of the impact of government transactions on the total national economy (This is sought to be remedied by an economic classification); and

(*d*) it is not helpful as a basis for judging the progress towards the achievement of goals and objectives as envisaged in the development plans.

During the past two decades, it was becoming increasingly clear that in the context of a planned economy and the growing size and complexity of governmental operations, there is a need to reorient our budgetary system to the new developmental responsibilities of management in ensuring fulfilment of Plan objectives. It was felt that the budget in the modern day has to serve not merely the needs of accountability, but also the needs of management and top level planners and decision makers. The budgetary structure and process should be such that it reveals a comprehensive picture of the total efforts of government in its functional fields, the economics of the programmes and activities, the results that flow from them and the relationship between money spent and results achieved. In other words, the budget should be a financial and work plan that would highlight what the Government is doing in terms of its programmes, activities and projects, how much it is doing, at what cost and with what results. Though more and more material about governmental activities is now made available through a number of supplementary documents, such as the Explanatory Memorandum, Notes on Important Schemes and Projects, Annual Reports, etc. at the centre, and Plan Volumes (showing details of plan schemes, their aims, targets, etc.), Annual Administration Reports, Explanatory Memorandum, etc. at the State level, these are neither comprehensive nor related to or identifiable with specific budget provisions which, as mentioned earlier, are in terms of objects of expenditure.

PERFORMANCE BUDGETING—DEFINITION

The technique of performance budgeting seeks to remedy the defects in the conventional budget by highlighting management considerations. The emphasis in performance budgeting is on accomplishments rather than on the means of accomplishments, on the precise definition of work to be done or service to be rendered rather than on details regarding money spent on the several items. A performance budget seeks to present the purposes and objectives for which funds are requested, the costs of the various programmes and activities proposed for achieving these objectives and quantitative data measuring the work performed or services rendered or results accomplished under each programme and activity. In brief, performance budget is a comprehensive operational document, conceived, presented and implemented in terms of programmes, projects and activities, with their financial and physical aspects closely interwoven.

BASIC STEPS

There are three inter-related considerations or basic steps in the development of performance butgeting in any organisation. They are :

(*a*) evolving a meaningful classification structure in terms of programmes, projects and activities under each function entrusted to an organisation in order to show precisely its objectives, the work done and the organisational responsibilities;

(*b*) bringing the system of accounts, reporting and the prevailing financial management practices in general into accord with the new classification and requirements of performance budgeting; and

(*c*) establishing suitable work units for physical measurement of work done, or services rendered under each programme and activity and developing suitable norms, standards and other performance indicators for appraisal of performance.

The above constitute the basic elements in the introduction of performance budgeting in any organisation, each serving the management needs in part, and together, forming an important tool for review, analysis and control.

PURPOSE OF PERFORMANCE BUDGETS

The main purposes sought to be achieved by performance budgeting are :

(*a*) to co-relate the physical and financial aspects of every programme, project or activity;

(*b*) to improve budget formulation, review and decision making at all levels of operation in the government machinery;

(*c*) to facilitate better appreciation and review by the legislature;

(*d*) to make possible more effective performance audit;

(*e*) to measure progress towards long-term and short-term objectives as envisaged in the Plan; and

(*f*) to bring annual budgets and annual Plans together through a common language.

DEVELOPMENTS

The merits of the technique of performance budgeting were recognised by the Working Group on Performance Budgeting set up by the Study Team on Financial Administration of the Administrative Reforms Commission appointed by the Government of India.* Endorsing the Report of the Working Group, the Administrative Reforms Commission have recommended that "the departments and organisations which are in direct charge of development programmes should introduce performance budgeting. This should be done both at the Centre and in the States". This recommendation has been accepted by the Government of India and some State Governments. Today, in India, performance budget documents of a number of departments and organisations are being prepared not only by the Central Government but also by a number of State Governments as well. It is expected that within the next few years, all the developmental departments at the Centre and a sizable number of States would have converted their budgets on the basis of the new technique. These performance budgets are, however, now being presented to the Parliament and State Legislatures as post-budget supplementary documents, pending the required accounting support and other necessary changes in the financial management practices. Much remains to be done in making these documents operationally useful to aid managerial performance.

*See the Report of Working Group on Performance Budgeting contained as 'Accompaniment B' in the *Report of the Administrative Reforms Commission's Study Team on Financial Administration*, New Delhi, Manager of Publications, Government of India, 1967 and Administrative Reforms Commission's *Report on 'Finance, Accounts and Audit,'* New Delhi, Manager of Publications, Government of India, 1968.

LIMITATIONS AND PERSPECTIVE

Performance budgeting provides no remedy for the administrative deficiencies in the budget process It is no panacea for the administrative and organisational shortcomings. It is only one of the useful tools to be properly and intelligently made use of by a well-organised and efficient administrative set-up. The concept of performance budgeting is clearly applicable and useful in respect of developmental projects, programmes and operations that lead to some homogeneous end product or quantifiable physical accomplishment. Its usefulness is somewhat limited in respect of activities of a routine administrative nature or such unpredictable areas as basic research that are not measurable in any meaningful manner, though even in the 'non-measurable' areas or welfare services, it has been established that performance budgeting provides a meaningful base for review and analysis. Also, performance budgeting enables only quantitative and financial evaluation of programmes and projects. It does not facilitate qualitative evaluation. Quality factors and other aspects such as topographical differences, changes in techniques and work methods, etc. should be borne in mind while drawing any conclusions or forming any value judgment out of quantitative data generated and used in performance budgeting.

Although the technique of performance budgeting offers great potentialities for management, its introduction in practice must be approached with caution. Its application assumes the existence of a number of factors or facilities. It requires greater financial discipline, trained manpower, a regular and efficient system of recording and reporting financial and physical data, adequate powers commensurate with responsibility and effective coordination between various government agencies and the budget making authority. All the advantages of the technique cannot be realised in a short span of time. The basic elements will have to be developed in a gradual and evolutionary manner over a period. In making a beginning towards performance budgeting, priority should be given to projects, public sector undertakings and developmental departments. In respect of capital projects, performance budgeting could be really effective, if modern planning and scheduling techniques like PERT/CPM (Network Analysis) are increasingly made use of to have realistic cost schedules in relation to physical plan. Other modern techniques like cost-benefit analysis, operational research, systems analysis, discounted cash flow, management accounting etc., though not forming part of the technique of performance budgeting, are nevertheless useful adjuncts to it. They aid management in investment planning and decision making when applied to appropriate situations and help in the rational choice of programmes and projects from amongst competing alternatives. When a decision is arrived at, the technique of performance budgeting helps in their proper implementation and control through its built-in structure of classification, analysis, review and appraisal.

In the chapters that follow, the various aspects in performance budgeting are discussed and illustrated. The basic issues that need to be tackled in the installation of the technique and in its operation have been outlined in the last chapter. In order to put things in the proper perspective, a separate chapter has also been added (Chapter 8) explaining the scope and approach of programme and performance budgeting as is being developed and practised in India. It also brings out the origin of the concept and the subsequent developments in India.

2

Structural Aspects

In the preparation of a performance budget for any organisation, the first stage is the determination of a proper classification structure along programmes and activities in relation to the function(s) entrusted to it. A performance budget is to be prepared for each department/organisation suited for each level—ministry/department, departmental head, controlling officers and subordinate offices—and not for each function or programme of government. In other words, performance budgets are with reference to each department or organisation and not by functions, which may be entrusted to more than one department.

PROGRAMME AND ACTIVITY CLASSIFICATION

Before considering the practical steps and issues involved in arriving at a classification base, it is necesssary to be familiar with certain terms used in the technique of performance budgeting like functions, programmes, activities and projects. They are explained below :

Term	*Definition*	*Examples*	
(1)	(2)	(3)	(4)
Function	A major division of governmental efforts which provides a distinct public service.	Agricultural Development	Health
Programme	A segment of a function, usually having an end object and identifiable with a major organisation; purpose of a programme is to contribute to the achievement of the objectives of the function to which it belongs.	Development of Commercial Crops	Control of Communicable Diseases
Activity	A division of a programme into homogeneous types of works or schemes; an activity contributes to the attainment of the end results of the programme to which it	Cotton Development	Malaria Eradication

(1)	(2)	(3)	(4)
	belongs; activity is usually identifiable with a lower operating level organisation.		

NOTE—'Activity' denotes usually revenue expenditure. The word, 'project' is used, if the expenditure is of a capital nature. An activity could be further sub-divided into individual tasks, works or performance units at lower levels.

Classification in terms of programmes and activities could be as broad or as detailed as considered necessary, depending on the level for which a performance budget is prepared. The following illustration will explain this point :

Department	*Level for which prepared*	*Programme and Activity Classification*
(1)	(2)	(3)
PWD (Buildings and Roads) of a State Government	Government/ Legislature	I. Construction and development of roads and bridges : (*i*) National highways (Central Sector) (*ii*) National highways (Urban links—State portion) (*iii*) State highways (*iv*) Major district roads (*v*) Other district roads (*vi*) Village roads, etc.
PWD (Buildings and Roads) of a State Government	Chief Engineer/ Superintending Engineer	I. Construction and development of roads and bridges : (*a*) *National highways* (Central Sector) (*i*) Missing links (*ii*) Improvement to roads (*iii*) Widening of roads (*iv*) Construction of bridges (*v*) By passes, etc. (*b*) *National highways* (Urban links—State portion) (Further classification into suitable activities as above) (*c*) *State highways* (As indicatied above, classification into activities for each programme to be elaborated)

(1)	(2)	(3)
PWD (Buildings and Roads) of a State Government	Executive Engineer	The Executive Engineer is the immediate person supervising the works. As such, the classification should be more elaborate and each major activity further split up. Thus, for example, an activity like construction of bridges could be split up into major, minor and medium or in any other suitable manner. Ultimate control will be in terms of specific works under each activity. The works or schemes would be the lowest level of classification, *i.e.*, performance units.

NOTE—The above is only indicative in respect of one major programme of the department. It is not exhaustive of the programmes of the department, nor is it implied in the above illustration that the classification suggested is the ideal one. It is up to the department to arrive at its own classification, as it thinks best).

It may be mentioned in this connection that though the terms programmes and activities have been broadly defined, there should be no rigidity in evolving a classification structure. In one department, a programme by itself may enable managerial control at various levels, whereas in another department, a programme may require to be further broken up to have effective control. Thus, a programme, if it is too broad for proper control, can be divided into sub-programmes and each sub-programme further divided into activities and sub-activities depending on the need felt in the department. There could be no hard and fast rule in this. It is immaterial whether a broad area of work or service is called a programme or a sub-programme. All that matters is the relevance of such a classification for purposes of management.

Ideally, the programmes and activities to be evolved should have clearly definable and measurable end objectives, should be capable of being classified in a manner that will facilitate accounting and computation of costs, should serve to facilitate a consideration of determining priorities and selecting the best course of action to reach a specified goal and should, in general, lend themselves to analytical studies. But, in actual practice, as already mentioned, it is the use for management that should be the primary consideration, and not the technical characteristics assumed in theory. The classification is not an end by itself; it has to serve specific needs of analysis and control to those to whom it is meant.

STEPS INVOLVED

The following is the sequence of steps to be taken in evolving a programme/activity classification for an organisation :

(*a*) Constitute a team of officers consisting of the head of the department, the interal financial adviser/finance and accounts officer, a representative of the concerned expenditure division of the Finance Ministry/Department and two senior administrators/programme executives;

(*b*) This Team should then discuss and spell out clearly the aims, goals and objectives of the department/organisation;

(*c*) From the list of objectives, make out a comprehensive list of the work done or services rendered; and

(*d*) Thereafter, prepare a classification base in terms of programmes and activities that is best indicative of the whole range of operations. (For purposes of preparing a performance budget, which is agency oriented, the programme is the highest level of classification).

As pointed out earlier, the department is the best judge to decide how broad or how detailed the classification should be depending on the level for which it is meant. A classification structure is to be tailor-made to suit individual situations.

ACTIVITY COSTS

After the programmes and their sub-divisions are determined, the next step would be to arrive at their costs for inclusion in the budget. As the accounts and budget heads are now oriented to object-type of classification, working out the cost in terms of programmes/activities will involve a lot of clerical labour and time in the initial stages. Budget provisions for a programme or activity now appear in the budget at a number of places, involving one or more Demands for Grants, major heads, minor heads and other subordinate heads. They are also not clearly identifiable as such in accounts and budget. Expenditure is classified in terms of several objects of expenditure under different heads at different places according to the department which executes the activity and incurs the expenditure thereon. This is as per the principle of classification laid down in the Account Code. Thus, the budget and accounts staff will have to first understand the scope and content of an activity or programme and then identify the relevant sub-heads in the budget, where the elements of cost of that activity or programme in terms of establishment charges, travel, contingencies, grant-in-aid, stores, etc. are provided for. Each sub-head will have to be identified as relating to a particular programme/activity and all such provisions culled out and added. This procedure is necessary so long as the performance budget continues to be prepared as a post-budget supplementary document, pending accounting reforms. The position will be different when, after the accounting changes, the performance budget becomes integrated with the Demands for Grants which will then have a new classification structure along functions, programmes and activities. When that stage is reached, performance budgets will form part of the system and not a mere conversion process as it is now.

There may be cases where the provision in a sub-head in the budget may relate to more than one activity or programme. The sub-head may be in respect of pay and allowances of officers and staff engaged on more than one activity. In such cases, at present, the only way open is to decide, on an approximate basis, how their expenses could be apportioned among the activities they serve. This can be decided only by the department/organisation from their experience. Since, however, the classification in the present day budgets is far too detailed, cases of this nature have been found to be few. The records kept in the offices will help determine a satisfactory apportionment. If necessary, time and motion studies could be gradually undertaken to arrive at more realistic results.

It is necessary to recognise that, as things stand today in India, it is not always possible to work out the true 'cost' of a programme/activity to be provided for in a year. Apart from the cash basis of accounting and budgeting followed, which is one constraint (though not very material for most part of normal governmental activities), there are difficulties in allocating administrative overheads, such as direction and supervision charges, house-keeping expenses, etc. No satisfactory formula exists for allocating them to the various activities. Moreover, the time and effort involved in doing this may not be commensurate with the results. Therefore, the best course would be to keep these overheads as distinct items in the classification as 'Direction & Administration' or 'Direction & Policy Making' or 'Supervision' and 'General Administration'. These heads should include only such expenses which cannot be identified as pertaining to individual activities. Thus, if certain officers and staff are meant for a programme or activity, their cost would go to that programme/activity, whereas controlling officers, heads of departments and their staff would be included under 'Supervision' or 'Direction' as the case may be. This procedure has the added advantage in that overhead costs would be clearly known in relation to the core budget. Percentages can be worked out and compared year after year. This will also facilitate setting up of norms for such expenditure.

To illustrate further, the headquarters expenses of the chief engineer and his office could form a head, 'Direction' those of the superintending engineers and their office may come under 'Supervision' and those of the executive engineers and their subordinates under "Execution'. This course is suggested, as it may not be possible to allocate their expenses among the several programmes/projects controlled or executed by them. On the other hand, if any of them, *i.e.*, the C.E. or S.E. or E.E. is specifically in-charge of a project, their expenses would form part of the cost of that project. Thus, wherever expenses could be identified with a project or activity, they should be charged as such and not taken as a general overhead. Again, for example, expenditure on the Director of Agriculture and his headquarters staff cannot possibly be allocated among the various programmes of the Department of Agriculture, nor is it possible to distribute the supervision expenditure of the regional Deputy Directors among the programmes they control. But, if there is one Deputy Director exclusively dealing with, say, commercial crops, his expenses should go to this programme and not to the 'Supervision' overhead.

SCOPE AND LIMITATION

Another point to be remembered is that the performance budget of a department or organisation will reflect only those programmes or activities for which that department is responsible for implementation and for which funds are asked for by it. Thus, if the Irrigation Department has Minor Irrigation as one of its programmes, it will include only that part of the programme for which it is responsible and for which it has asked for funds. It will not, for instance, include in its performance budget, grants given to local bodies for minor irrigation by, say, the Rural Development Department.

OUTLAY ON PUBLIC WORKS

However, outlay on construction works relating to various functions and programmes executed by the Public Works Department is on a slightly different footing. It can either be totally excluded from the purview of the performance budgets of the Administrative Ministry/Department on the ground that the performance relating to construction works is not their responsiblity, or such outlays taken into account in computing the cost of the various programmes and activities

of the Administrative Ministry/Department and shown in their performance budgets. It would be an advantage to follow the latter course, as this alone will show the total outay of the programme in the performance budget of the Administrative Ministry/Department. It is true that the Ministry or Department may not be able to explain the programme and performance relating to public works outlay, but a suitable mention could be made while explaining the programme, that the cost is inclusive of a certain provision towards specified construction works done by the P.W.D. and that their performance in detail will be accounted for in the performance budget of the P.W.D. In other words, while the performance budget of the P.W.D. will, no doubt, show performance details under the various programmes and works of various Ministries/Departments, the performance budgets of the Administrative Ministries/Departments will only include this outlay in broad terms without detailed explanations about actual accomplishment, *vis-a-vis* plan of action. As the legislature will be voting funds only on the basis of the Demands for Grants, there should be no objection if the outlays appear in the performance budget of the P.W.D. and also of the concerned Administrative Ministry/Department. The present practice at the Centre and in the States is not uniform in this regard. Public Works outlay is generally seen excluded from the performance budgets of the Ministries/Departments. For the sake of uniformity and for giving a total picture of the outlay under a given programme, it may be necessary to take into account construction outlays done by the P.W.D. also, as part of the cost of individual programmes.

LOANS AND GRANTS

A large part of the capital budget may sometimes be by way of bulk loans and grants to State Governments/Organisations, etc. For reasons stated in Chapter 7, it may be expedient to classify these as such distinctly in the programme structure of the Department. Where, however, in the case of loans and grants to individuals, organisations institutions etc., the purpose is known, the amounts should be appropriately added to the cost of the relevant programme and properly explained in the part relating to 'Explanation of Financial Requirements' (See Chapter 5).

ORGANISATIONAL REALITIES

It is also nccessary to recognise that in any classification scheme by programmes and detailed activities, the organisational structure should be taken into account. Though, ideally, a programme is to be identifiable with a major administrative unit and an activity with a specific operating unit, such clear synchronisation is difficult to be achieved in practice. This is particularly so at lower levels, where a field organisation may be carrying out a number of activities. The cost of the field unit cannot, perhaps, be split up and identified with each such activity. In such a case, it would be necessary to recognise this constraint without attempting to go in for detailed sub-classification. By and by, organisation could be streamlined to make possible a rational classification that will also permit identification of responsibility centres. To illustrate, the extension and village level workers of, say, the Community Development Department, may be deployed to carry out agricultural extension services, family planning, health and other services. It is not possible to work out individual cost of these operations, taking into account the cost of these workers also. Perhaps, their expenditure may be collected under one head 'Extension Services'. This aspect will be particularly felt when the preparation of a performance budget for lower levels is attempted.

ILLUSTRATIONS

Few illustrations of a programme/activity classification in respect of certain organisations at the centre and state level are given below. It will be useful to compare them with the traditional classification now appearing in the concerned Demands for Grants of these organisations. In a performance budget, the programmes and activities would present, at one place, the total provisions covering Revenue, Capital and Loan transactions, though the Revenue and capital portion will be distinctly exhibited to facilitate year by year comparison and proper control. Similarly, though the total cost of a programme or activity will cover both Plan and non-Plan Provisions, they will be shown distinctly in the classification, as this information is vital in our set-up. (See Chapter 5 for the Format of a Performance Budget).

A. Ministry of Irrigation & Power, Government of India*

Programme/Activity Classification :

I. *Irrigation (Surveys and Investigations, Research, Training, etc.)* :

1. Data Collection.
2. Surveys and Investigations.
3. Research.
4. Training.
5. Coordination of Soil Conservation Measures in River Valley Catchments.
6. Review of Irrigation Development.

II. *Development of Power* :

1. Data Collection.
2. Surveys and Investigations.
3. Research.
4. Training.
5. Central Generation Schemes :
   (*a*) Badarpur Thermal Power Project,
   (*b*) Loktak Hydro Electric Project,
   (*c*) Baira-Siul Hydro-Electric Project, and
   (*d*) Sala Hydro-Electric Project.
6. Financial Assistance for Power Development.
7. Load Despatching Stations.
8. Extension of Electricity to Harijan Bastis.

III. *Flood Control Coordination* :

1. Surveys and Investigations.
2. Flood Forecasting and Warning Centres, etc.
3. Procurement of Dredgers.

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*1. *Source* : Performance Budget, 1972-73 of the Ministry of Irrigation and Power, Government of India as presented to Parliament.

2. The cost of the various activities has been culled out from several sub-heads spread over a number of Demands for Grants and major heads of Accounts as follows :

(*a*) Demand No. 58, Major heads 19, 39 and 71; (*b*) Demand No. 59, Major heads 42 and 44; (*c*) Demand No. 60, Major heads 39 and 45; (*d*) Demand No. 122, Major head 98; (*e*) Demand No. 123, Major heads 100, 101 and 124; (*f*) Demand No. 22, Major head 74; and (*g*) Demand No. 113, Loans & Advances.

IV. *Consultancy Services*

1. Water Wing.
2. Power Wing.

V. *Assistance to Foreign Countries* :

1. Trisuli Hydro Electric Project.
2. Gandak Project.

VI. *Farakka Barrage Project.*

VII. *Technical Control and Supervision* :

1. Supervision and Coordination:
   (*a*) Irrigation and Flood Control, and
   (*b*) Power Wing.
2. Coordination of Power Resources Utilisation.
3. Other Statutory Functions.

VIII. *Policy Formulation and Administration* :

1. Secretariat.
2. Tribunals set up under the Inter-State Water Disputes Act, 1956 :
   (*a*) Krishna Godavari Water Disputes Tribunal, and
   (*b*) Narmada Water Disputes Tribunal.
3. Chambal Control Board.

IX. *Employment Oriented Schemes* :

1. Intensive Field Investigations for providing employment opportunities to qualified Engineers.
2. Rural Engineering Surveys.

B. PUBLIC WORKS (IRRIGATION) DEPARTMENT, GOVERNMENT OF PUNJAB*

Programme/Activity Classification :

1. Multipurpose River Valley Projects.
   (*a*) Thein Dam Project
2. Major and Medium Irrigation Projects.
3. Minor Irrigation Projects.
4. Flood Control, Drainage and Anti-water Logging Work Schemes.
5. Extension and Improvement of existing irrigation works.
6. Maintenance and Operation :
   (*i*) Irrigation Works,
   (*ii*) Flood Control and Drainage Works, and
   (*iii*) Tubewells.

*1. *Source* : Performance Budgets of Selected Departments, Government of Punjab, 1972-73, as presented to the State Legislature.

2. The cost of the various activities has been culled out from several sub-heads spread over the following Demands and major heads of Account :

(*a*) Demand No. 27, Major head 42; (*b*) Demand No. 28, Major heads 43 & 44; (*c*) Demand No. 29, Major heads 43, 44 and 99; (*d*) Demand No. 44, Major head 98, and (*e*) Demand No. 45, Major head 99.

7. Tools and Plant.
8. Survey and Investigations.
9. Research.
10. Grant-in-Aid.
11. Administration and overheads :
    (*a*) Hydel Administration,
    (*b*) Direction,
    (*c*) Supervision, and
    (*d*) Execution.

Add interest charges
Add suspense (Net)

C. DEPARTMENT OF FAMILY PLANNING, GOVERNMENT OF INDIA*

Programme/Activity Classification

I. Direct Expenditure :

1. Services & Supplies.
2. Mass Education.
3. Research.
4. Training.
5. Technical Advice and Supervision.
6. Direction and Administration,

II. Assistance to States and Union Territories Governments.

D. FAMILY PLANNING, GOVERNMENT OF PUNJAB†

Programme/Activity Classification :

1. Services and Supplies.
2. Mass Education, Information and Extension.
3. Training and Research.
4. Family Planning Efforts by Local Bodies and Voluntary Organisations.
5. Transport Services.
6. Direction.
7. General Administration.
8. Construction of Buildings.

*1. *Source* : Performance Budget 1970-71, Department of Family Planning, Government of India, as presented to Parliament.

2. The cost of various activities has been culled out from several sub-heads spread over the following Demands and Major Heads of Account :

(*a*) Demand No. 37, Major Head 19; (*b*) Demand No. 39, Major Head 30; (*c*) Demand No. 26, Major Head 74; (*d*) Demand No. 114, Loans and Advances; (*e*) Demand No. 120, Major Heads 96 and 124; and (*f*) Area Demands 50, 51, 52, 53 and 55.

†1. *Source* : Performance Budgets of Selected Departments, Government of Punjab, 1972-73, as presented to the State Legislature.

2. The cost of the various activities has been culled out from several sub-heads spread over the following Demands and Major Heads of Account :

(*a*) Demand No. 19, Major head 30-A; and (*b*) Demand No. 46, Major head 103.

E. STATE TRANSPORT DEPARTMENT, TAMIL NADU*

Programme/Activity Classification :

1. Policy Formulation—Direction Charges.
2. Bus Operation:
   (*a*) Madras including long distance and district services, and
   (*b*) Kanyakumari branch
3. Workshops.

F. DEPARTMENT OF TRANSPORT, GOVERNMENT OF PUNJAB†

Programme/Activity Classification :

1. Regulatory :
   (*a*) Direction,
   (*b*) Taxation and Licensing, and
   (*c*) Enforcement.

   Total 1 Regulatory

2. Commercial :
   (*a*) Direction,
   (*b*) Supervision,
   (*c*) Operation,
   (*d*) Maintenance and Repairs,
   (*e*) Replacement of buses, and
   (*f*) Expansion and Development :
      (*i*) Expansion of Fleet,
      (*ii*) Land and Buildings, and
      (*iii*) Workshop Facilities.

   Add Contributions :
      (*i*) Motor Transport Depreciation Reserve Fund
      (*ii*) Motor Transport Reserve Fund
      (*iii*) Contributory Provident Fund

   Total 2 Commercial

*1. *Source* : Performance Budget, 1971-72 of Transport Department, Tamil Nadu Government, as presented to State Legislature.

2. The cost of the various activities has been culled out from several sub-heads spread over the following Demands and Major heads.

(*a*) Demand No. 30—Working Expenses; and (*b*) Demand No. 43—Capital Outlay.

†1. *Source* : Performance Budgets of Selected Departments, Government of Punjab, 1972-73, as presented to the State Legislature.

2. The cost of the various activities has been culled out from several sub-heads spread over the following Demands and Major heads :

(*a*) Demand No. 3, Major head 11; (*b*) Demand No. 12, Major head 23; (*c*) Demand No. 33, Major head 57; and (*d*) Demand No. 48, Major head 114.

3. Compare the activity classification of Punjab and Tamil Nadu. Differences in functions and responsibilities partly account for the different classifications.

It may, however, be mentioned here that the above six examples have been given only by way of illustration. They are not meant to convey that the classification followed is necessarily the ideal one. Also, the classification was meant for top level, *i.e.*, Parliament/Legislature.

G. DIRECTORATE OF EDUCATION (GENERAL) OF A STATE GOVERNMENT—A POSSIBLE CLASSIFICATION BY ACTIVITIES*

Programme/Activity Classification :

1. Elementary Education :
   (*a*) Provision of Schooling Facilities for 6—11 age groups, and
   (*b*) Teachers' Training.
2. Secondary Education :
   (*a*) Provision of Schooling Facilities for 11—17 age group, and
   (*b*) Teachers' training.
3. Collegiate and University Education :
   (*a*) University, and
   (*b*) Colleges.
4. Scholarships and other financial assistance :
   (*a*) Scholarships,
   (*b*) Freeships and Stipends, and
   (*c*) Loans.
5. Development of Hindi :
   (*a*) Provision of Teachers, and
   (*b*) Training.
6. Development of Regional Languages :
   (*a*) Provision of Text Books, and
   (*b*) Other Promotional Activities.
7. Social Education :
   (*a*) Adult Education,
   (*b*) Audio-visual Education,
   (*c*) Community Centres, and
   (*d*) Other Schemes.
8. Special Education :
   (*a*) Art Schools,
   (*b*) Music Schools,
   (*c*) Basic Schools,
   (*d*) Reformatory Schools,
   (*e*) Sanskrit Schools, and
   (*f*) Other Schemes.

*This is only illustrative and needs to be adapted/improved upon to suit local conditions and needs.

9. Sports, Youth Services and other Cultural Programmes :

   (*a*) Sports,
   (*b*) Physical Education,
   (*c*) NCC and Allied Schemes,
   (*d*) Boy Scouts and Girl Guides, and
   (*e*) Other Cultural Programmes.

10. Library Services.

11. Research.

12. Direction and Administration.

13. Inspection.

14. General Contributions and Grants to Miscellaneous Bodies.

15. Buildings and other Construction Works.

H. DEPARTMENT OF ANIMAL HUSBANDRY (PUNJAB) *

Programme/Activity Classification :

I. Veterinary Services :

   (*a*) Veterinary Care, and
   (*b*) Preventive Measures.

   Total — I

II. Animal Breeding :

   (*i*) Cattle Breeding,
   (*ii*) Sheep Breeding,
   (*iii*) Poultry Breeding,
   (*iv*) Piggery Breeding, and
   (*v*) Mule Breeding.

   Total — II

III. Feed and Fodder Development

IV. Marketing

V. Training

VI. Veterinary Education and Research

VII. Direction

VIII. Administration

IX. Construction

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*1. *Source* : Performance Budgets of Selected Departments, Government of Punjab, 1972-73.

2. The activity costs have been collected from the following Demands and Major heads :

(*a*) Demand No. 21, Major head 33; (*b*) Demand No. 31, Major head 103; and (*c*) Demand No. 29; and Major head 50.

I. ANIMAL HUSBANDRY (MAHARASHTRA)*

Programme Classification :

1. Direction & Control.
2. Cattle Development.
3. Sheep Development.
4. Poultry Development.
5. Poultry Dressing Plant.
6. Piggery Development.
7. Bacon Factory.
8. Veterinary Services.
9. Exhibition and Propaganda.
10. Livestock and Allied Statistics.
11. Training and Veterinary Education.

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*1. *Source* : Government of Maharashtra, Performance Budget 1972-73, Agriculture & Cooperation Department (Animal Husbandry).

2. In the approach followed by Maharashtra, the broad programmes are first given in a statement, showing the current year's estimates, revised estimates and estimates for the next budget year. Plan and Non-Plan as well as Capital and Revenue are also distinctly shown. This statement is very useful (See also chapter 5 for the format).

3. Each programme is then taken up separately one by one and further classification by activities indicated. For example, 'Cattle Development' is broken into—(*a*) Cattle Breeding Farms; (*b*) Artificial Insemination Centres; (*c*) Key Village and Intensive Cattle Development Projects, (*d*) Subsidised Cattle Breeding, and (*e*) Feed Mixing Units and Fodder Development. The classification may be compared with that of Punjab given at Illustration H.

4. Programme/Activity-wise classification as well as object-wise classification could be as broad or as detailed according to the felt needs of control at each level. In the performance budget documents of Maharashtra Government, the classification by detailed activities and objects appears to be rather too elaborate for top level.

3

Accounting Aspects

The establishment of a meaningful classification structure is of primary importance in developing a sound financial management system in government or any organisation, as it provides the basic framework for all decision making and analysis. The budgetary and accounting structure as well as the contents of the budget are the determining factors not only on the adequacy and effectiveness of legislative control over financial administration and the decision making processes, but also for effective expenditure control and management within the executive, co-relation with the long term and and annual development plans, implementation and evaluation of the various programmes and activities at different levels and a proper economic analysis of the government transactions. In the context of the increased size and complexity of the activities of modern governments, accounting and budgetary structure is significant, apart from the accountability functions, for its ability in translating into action the governmental policies and programmes and in implementing the social and economic objectives of government.

GOVERNMENT ACCOUNTS—PURPOSES AND EXISTING INADEQUACIES

A Government needs the type of budget and accounts which are adequate in relation to the purposes to be served. Broadly speaking, the purposes which must be served by government accounts are as follows :[1]

(*a*) Accounting system must facilitate financial and legal accountability, both from the executive to the legislature and, within the executive, from lower to higher levels;

(*b*) It should serve as a tool of the executive in ensuring financial control;

(*c*) Accounts must be maintained on a basis which will facilitate an independent audit;

(*d*) The system of accounts must provide management at all levels with timely information for planning, programming and directing the several programmes and activities;

[1] See also "Government Accounting and Budget Execution", United Nations, Department of Economic Affairs, New York, 1952.

(*e*) The accounting system should throw up information which could be related to the broad functional areas served by the Government in order to enable a rational determination of the allocation of resources among the several functions; and

(*f*) Government accounts must facilitate economic analysis of governmental operations and their impact on the national economy.

The various purposes mentioned above could be brought under two broad areas—accountability and management functions. Traditionally, the form of accounts in India prescribed by the Comptroller and Auditor General with the approval of the President, is the basis on which budgets are prepared and presented to the legislatures by the Central and State Governments. The classification and budgetary structure has been evolved and developed mainly to ensure financial and legal accountability of the executive to the legislature and observance of similar accountability on the part of each subordinate authority within the executive itself. Accountability and financial control are the twin considerations that have weighed in the determination of the format of the structure. With this end in view, the form of accounts has a close correspondence with the departments or agencies collecting receipts or incurring expenditure. The basic principle[2] of classification is that it must have closer reference to the department(s) in which the revenue or expenditure occurs than to the purpose of the revenue or expenditure or the grounds on which it is sanctioned. In other words, the basic concern is with the organisation in which the transaction occurs, on what items money is spent and not the purpose served by it. This simple framework has not been able to stand the huge increase in and expansion of governmental outlays and functions. Though it ensures legal accountability, it was becoming obvious that, as regards helping the management in the proper implementation of their developmental tasks or in enabling rational decision making with reference to policies or in a proper economic analysis of govenmental transactions, it has proved inadequate. In particular, in the context of developmental planning, it has been realised that the lack of a co-relation between the account and the budget heads on the one hand and the plan heads on the other has proved to be one of the serious impediments in the implementation and evaluation of Plan objectives. It does not also enable one to have a proper understanding of the broad purposes for which resources are allocated or what the government is doing in terms of its various programmes and activities under each given function. It has proved ineffective as a base for judging the progress towards the goals and targets set.

There is thus a need for modernising the accounting structure with equal if not more accent on managerial aspects. The need is particulary felt now in view of the decision to introduce performance budgeting.[3] One of the primary objectives of the technique of performance budgeting is the establishment of a meaningful relationship between inputs and outputs by a display of governmental transactions in terms of functions, programmes, activities and projects. Since performance budgeting seeks to bring out the financial and physical aspects of the programmes and activities under each functional area of governmenal efforts, there is the need for a structure of accounts and budget which will focus attention on these

[2] Article 30 of Account Code, Vol. 1, Comptroller and Auditor General of India.

[3] For a detailed discussion on Performance Budgeting, See 'A Manual for Programme and Performance Budgeting', U.N., Department of Economic & Social Affairs 1965 and the Report of Study Team on Financial Administration; Administrative Reforms Commission, Government of India, May 1967.

facilitate determination of their cost with reference to resources deployed and help in their evaluation. In other words, there is the need for a programme-oriented classification base within an overall functional grouping in order to enable better formulation of the budget in relation to policy objectives, identification of the goals and objectives of each organisation in terms of its programmes and activities and to facilitate a built-in system that will bring out what has been done in relation to what was programmed for.

SYSTEMS OF CLASSIFICATION

As already stated, the accounting and budgetary structure under planned economic development has a variety of objectives to serve. It is apparent that no single classification system can serve all the objectives. Different methods are to be integrated into one to serve the purposes of accountability, programme management, review and evaluation, economic analysis, and so on. In the wake of a growing awareness to bring in planning and management considerations in the structure, many governments today have evolved new types of classification such as functional classification, economic classification and programme and activity classification in addition to or in conjunction with the traditional object basis.

The concept of functional classification has two facets—(*a*) functional groupings of transactions at macro level and (*b*) classification at micro level by purpose irrespective of the organisation. The idea is to have accounting heads grouped together in such a way that all expenditure under a given function of government like Education, Agricultural Development, Health, etc. is available at one place for an analysis and consideration of broad issues of resource allocation and priorities. Classification by purpose is done to achieve this. Here, the total outlay under a function is what is desired without regard to who spends the money.

Under Economic classification, the purpose is to bring out the impact of the incomings and outgoings of the Government on the national economy as a whole with a view to showing how much of the National Income has its source in government activities and what extent of the capital formation and asset creation is as a result of governmental operations. For this purpose, expenditure is grouped into current and capital categories, and within each, into such heads as consumption expenditure, transfer payments, subsidies, capital formation etc. An economic classification in conjunction with functional groupings has immense value in decision making in the fiscal field. Many governments are now bringing out a Functional-cum-Economic classification of their budgets either as part of the budget or as separate documents. In India too, an Economic-cum-Functional classification of the Central Budget is now being presented to the Parliament.

Programme and Activity classification is of direct impact and use to management. Such a classification into programmes suitably broken up into sub-programmes and activities, facilities programme management and the measurement of activities at the micro level. It is in this context that accounting is referred to as a 'tool of management'. This is the crux of performance budgeting.

Notwithstanding a functional, economic or programme classification, the organisational-cum-object basis of classification, as is being generally used in all conventional systems, is still necessary for accountability and control purposes. The problem is how to bring them all in one integrated system.

STRUCTURE OF GOVERNMENT ACCOUNTS IN INDIA AND THE NEEDED REFORMS

It will now be in order to have a look at the Indian system again. One of the distinctive features of the system is the extent of minute detail with which the financial transactions are differentiated and classified by organisations and items. Accounts are kept in three parts—Consolidated Fund, Contingency Fund and Public Account. The Consolidated Fund into which all revenues are credited and from which all services and supplies, whether voted or charged, are met after due process of law, is the relevant part for management purposes. It has three main divisons—Revenue, Capital and Debt (comprising of Public Debt, Loans and Advances and Inter-State Settlement). Each division has a number of sections comprising of what are called 'Major Heads' of Account, which are the main units of classification. These major heads are divided into minor, sub and detailed heads. The sub-heads constitute the primary units of appropriation. This structure is common to Central and State Governments. The basic structure of accounts dating back to the early years of this century has remained intact for a long time. Certain changes were made from the Ist April, 1937 on the introduction of Provincial Autonomy. Later, some important improvements were effected during 1961-62 in order to keep pace with the Constitutional changes and to facilitate a better analysis of government transactions. Changes were made in the sections, major and other heads and a kind of semi-functional structure was evolved. By and large, the new sections reflected to some extent the broad areas of governmental services and the major heads, the departments. There are, however, a number of deficiencies in the system as discussed hereafter.

Even after the improvements made during 1961 and 1962, the major heads of accounts are still not grouped into sections on a meaningful basis. Some of the sections now in vogue do not exactly bring out the broad services or functional areas of government. 'Collection of Taxes, Duties and other Principal Revenues', 'Debt Services', 'Administrative Services', 'Social and Developmental Services', 'Multipurpose River Schemes, Irrigation and Electricity Schemes', 'Public Works (including Roads) and Schemes of miscellaneous Public Improvements', 'Miscellaneous', 'Extra-ordinary items', etc., are some of the sections into which the major heads of account now stand grouped. In order to properly reflect the broad services rendered by the Government, it is necessary to recast the sections into, functional areas such as, Social and Community Services, Economic Services, General Services, and so on. Each of these broad sections could be divided further into meaningful sub-sections, as for example, Agriculture and Allied Services, Industries and Minerals, Water and Power Schemes, Transport and Communications, etc., under Economic Services, or Organs of State, Fiscal Services, Interest Payments and Servicing of Debt and other Administrative Services under General Services. These are only illustrative of the approach in this regard.

Certain broad functional groupings have been suggested by the United Nations Economic and Social Council.[4] These are by way of guidelines. Different countries have adopted different functional groupings to suit their individual needs. In India too, any functional grouping of major heads into sections must take into account the

[4]See Report of the Second Workshop on Problems of Budget Reclassification and Management in the ECAFE Region (E/UN-II BRW 3/L-2) and A Manual for Economic and Functional Classification of Government Transactions : U.N., Department of Economic and Social Affairs.

requirements here. In the present structure, the section entitled 'Miscellaneous' covers such diverse heads as Famine Relief, Stationery and Printing, Opium and Forest. Apparently, a grouping of such dissimilar services under one group called 'Miscellaneous' is a negation of functional approach. They need to be transferred to appropriate sections corresponding to the nature of the services rendered. Similarly, one of the existing sections called 'Social and Developmental Services' is too broad a category to reflect adequately the functional areas of governmental operations. Considering the vast differences in the nature of the services included in this section, it is necessary to split it up into two or more meaningful sections, such as Social and Community Service and Economic Services to be suitably sub-divided further into sub-sections. Of course, a re-arrangement of the major heads of account into new sections may involve dislocation in the position of the major heads and their numbers.

A grouping of the major heads of account to correspond to broad functional areas of service rendered by government is only a part of the job. The major heads also need to be closely looked into. As far as possible, each major head of account should correspond to a function of government as well as the major spending department identifiable with that function. Already most of the important functions/departments have separate major heads such as Agriculture, Public Health, Education, Industries, etc. But in recent years, certain functions of Government have assumed added importance and new activities have come up. The organisations or departments representing these important functions of Government do not, at present, have major heads of account to reflect their expenditure. For example, Family Planning would deserve a separate major head to itself.* So also, the growing functions represented by specific organisations like Tourism, Petroleum and Chemicals, Foreign Trade, Fisheries, etc., should also be accounted for under specific major heads. Again, at present there are some miscellaneous major heads like 39-Miscellaneous Social and Developmental Organisations, 71-Miscellaneous and 26-Miscellaneous Departments. These have to be broken as they accommodate a number of diverse activities and organisations.

After the major heads are overhauled and grouped properly into new sections, the minor heads under each major head require a thorough shake up. Some of the minor heads of today, which have grown over a long period, have become outmoded. They do not properly reflect the present day activities of the departments. For a rational accounting structure, and specifically for performance budgeting, there is the need for evolving such type of minor heads as would bring out the programmes and activities of the governmental organisations. A perusal of some of the minor heads being operated by the Central and State Governments would provide interesting material. Not only do they fail to reflect the activities, there is also a surprising lack of uniformity in the matter of classification. As the minor heads have proved inadequate to accommodate the present day activities of Government, it is found that identical programmes are provided for in the budget under different minor heads in different States. For example, Plant Protection and Pest Control schemes are classified under different minor heads, such as Agricultural Demonstrations and Propaganda including Public Exhibitions and Fairs, Agricultural Experiments and Research, Superintendence, Subordinate and Expert Staff, Miscellaneous and so on. Further, some of the minor heads cover a number of dissimilar activities. To illustrate, the minor head 'Agricultural Experiments and Research in certain States contains provision for Plant Protection, Intensive Agricultural Programmes, Seed

*A new head has since been opened.

Multiplication Farms, Vegetable Development, etc. Instances of this type can be multiplied. But these are enough to bring out the lack of uniformity, rationale and purposiveness in classifying expenditure.

SCOPE OF REFORMS AND WORK NOW BEING DONE

Recognising the deficiencies of the present accounting and budgetary structure as outlined above, the Administrative Reforms Commission appointed by the Government of India, in their Report on Finance, Accounts and Audit (1968), has made recommendations for reviewing and recasting the structure of major and minor heads of account. The Commission has suggested that the major heads of account should reflect the broad functions and major programmes of Goverment and that programmes, activities and projects of the various departments and organisations should be clearly identified and the minor heads suitably recast so as to reflect these. The heads of development adopted for plan purposes are also required to be reviewed with a view to establishing a direct co-relation between the plan heads and the account and budget heads. The recommendations of the ARC bearing on budgetary and accounting reforms have been referred to a Team of officers[5] who are presently engaged in considering suitable changes within the framework of the Constitution. Their job is nearing completion.

For purposes of performance budgeting, which is agency-oriented and not with reference to each function of government, the highest level of classification is a programme undertaken by a department. Therefore, a functional grouping or a functional classification is not strictly required to support a performance budget, though the utility of such a classification for analysis and decision making is universally accepted. The Team of officers referred to earlier have favoured a functional classification by purpose at micro level as far as possible, in addition to functional grouping of major heads at micro level and a classification along programmes and activities under each major head. They have favoured the idea that every functional major head should bring under it all expenditure relating to that function, irrespective of who spends the money. Thus, public works outlay on non-residential and institutional buildings related to a function is also proposed to be accounted for under the relevant functional major heads and not under Public Works heads as at present. Necessary changes in the Demands Structure are also being considered to achieve this.

Ideally, all expenditure under a given function of government or programmes within a function should be available at one place in accounts and budget. This has not been possible so far in view of the multiplicity of departments and agencies in-charge of functions and programmes and also because of the organisation-cum-object basis of classification. Schemes and projects under a programme are often executed by different organisations and the expenditure thereon lies dispersed in accounts and budget. Thus, if schemes under minor irrigation are executed by the Irrigation Department, expenditure would be available under the head of account operated by that Department. If the Public Works Department is also executing some schemes, the provision and expenditure will appear under its head of account. In practice, especially in the case of the State Governments, it is usual to come across cases where two or more departments are in charge of the same programme. In all such cases, expenditure on a programme or function now appear at different places in budget and

[5]Government of India, Ministry of Finance (Department of Economic Affairs) Resolution No. F. 1(65)-B/68 dated 22nd March, 1969. See also No. 19/ARC/70 dated 18th May, 1970 and No. 1-1/-ARC/71 dated 30th January, 1971 from the Comptroller and Auditor-General of India to all Administrative Ministries of Government of India and State Governments.

accounts. This unsatisfactory state of affairs is proposed to be rectified by the Team of officers. If their recommendations are accepted, a functional major head and the programme-oriented minor heads thereunder will record all expenditure relating to that function or programme, to the extent possible, at one place in the Revenue, Capital and Loans divisions.

Thus, if two or more departments are concerned with a particular function, all of them will operate the *same functional major head* of account. Similarly, when a programme is executed by more than one organisation, the organisations will operate *the same minor head* (representing the programme) within the *concerned major head reflecting the function*. It is expected that suitable accounting and funding devices would be worked out to achieve this without encountering serious problems of accounting and fund control. In particular, under this approach, it is understood that the Team of Officers are suggesting important changes in the Public Works heads. At present, P.W.D. major heads include works of all kind—residential, non-residential/institutional buildings and roads. It is proposed to rationalise the heads by having distinct major heads for Housing and Roads. These are to be placed under appropriate functional groupings or sections, *viz.*, Social and Community Services and Transport and Communications. Construction outlay relating to non-residential and other institutional buildings or other structures relating to various functions is proposed to be provided under the relevant functional major heads against the concerned programme minor heads. These heads, to the extent the provision relates to works to be done by the P.W.D., will be appearing in the Composite Demand of the P.W.D., who will be responsible for getting the funds, operating them and controlling them. This will avoid funding complications, but will ensure booking of expenditure on functional lines. It remains to be seen how far this scheme will run smoothly. Concrete details of the proposal, in elaboration of their earlier suggestions (vide circulars dated 18 May, 1970 and 30 January, 1971) are reported to be under finalisation. Construction outlay relating to general office accommodation, general services, etc. and common facilities like T & P, etc., will, however, be accounted for under a separate head called 'Public Works'.

If, however, the above scheme of strict functional classification were to run into practical difficulties, one possible way would be to have a meaningful programme and activity classification under each major head of account, which, as mentioned earlier, will primarily correspond to a function, and to a large extent, the department identifiable with that function. Cases where more than one department is involved in one function would be rather few like the Public Works Department or in the Agriculture Sector. Even where more than one department executes schemes under a programme within a function, funds could be provided for and expenditure debited against the respective major heads but under minor heads having the same nomenclature. Thus, for example, if agricultural extension schemes are executed by Agriculture and Community Development Departments, both the departments will operate their own major heads, but there could be identical minor heads having the nomenclature, say, 'Agricultural Extension' in both the major heads. If similar programmes and activities have the same nomenclature in the scheme of programme and activity classification, there will be no difficulty in identifying them and adding up the figures from two or more places. A strict functional classification can thus be avoided, if it means avoidable complications. What is needed is a proper functional grouping, assignment of major heads by functions/departments and a programme and activity classification for each department identifiable with a given function.

Two points have to be borne in mind in devising and implementing changes in the accounting structure. First, any reforms should conform to the constitutional requirements as regards the presentation of budget for approval by the Legislature and should not in any way result in whittling down legislative control. Statutory requirements regarding the functions of audit have also to be kept in view. Secondly, the heads of accounts are dealt with by a large number of officials including lower division clerks in Departments, Treasuries and Accounts Offices. It is essential that the heads of accounts are not changed frequently, as otherwise, there would be widespread confusion in classification and compilation of accounts. In determining minor heads to reflect the programmes and activities, it should also be remembered that programmes which are important and are of a long term character alone are allotted separate minor heads and that purely temporary programmes should be grouped under convenient minor heads, to avoid frequent changes in the account heads.

A Case Study of the structure of minor heads under the major head 31 Agriculture was conducted by the Working Group on Performance Budgeting (set up by the ARC) in consultation with the officers of the Departments of Agriculture and Finance as well as the Accountants General of three States and a new pattern was suggested for minor heads to correspond to the activities of the Department of Agriculture. These could be seen at pages 49-53 of the Report of the Study Team[6] on Accounts and Audit. These are not final but only indicative of the approach. Annexure to this paper shows how the accountability and management aspects could be integrated in one set of accounts. It may be seen therefrom that except, perhaps, for economic classification, the structure will satisfy all other requirements. Economic classification could be built up by suitable interpretation, reclassification and analysis of the data.

ACCOUNTING—A MANAGEMENT TOOL

Accounting being essentially a management function, there is imperative need to develop accounting competence within the departments and organisations to aid management. The manner in which detailed departmental accounts will be maintained and the type of data that should be generated are matters to be worked out in detail by each Department in consultation with Finance. At present, the departments are found wanting in the maintenance of even the basic records and accounts to ensure financial control with reference to appropriations, though they are required to do so and reconcile their figures with those kept by the Accountants General. The Administrative Reforms Commission has commented on this. They have envisaged a system under which the compilation of Central accounts will continue to be done by the Comptroller and Auditor General, but with minimum details, and the detailed accounts will be developed and maintained by the departments themselves to assist their managerial performance. At present far too many unnecessary details by items go into the budgets and the consolidated accounts kept by each A.G. There is a need to make the Demands for Grants and the Central accounts broad-based. This question is also being examined by the Team of Officers[7] referred to earlier.

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[6]See Report of Study Team on Accounts and Audit, Administrative Reforms Commission, Government of India, September 1967.

[7]The Team has since submitted its First Report on Reforms in the Demand Structure and Elimination of Details.

SYSTEMS OF ACCOUNTING

As in the case of systems of classification, there are different ways of recording government transactions, each serving distinct purposes. The different ways of accounting can be traced to the different time span of transactions. There are four main stages: (*a*) placing of orders or making a commitment, (*b*) receipt of goods and services, (*c*) disbursements for the goods received, supplies made or services rendered, and (*d*) the use of goods and services. Corresponding to these stages, there are four main methods of accounting, *viz.*, obligation, accrual, cash and accrued cost.

All the above bases are significant and have their specific uses. In a majority of countries including India, transactions are recorded on a cash basis. Its chief merit is that it enables a determination of total incomings and outgoings of cash as also an assessment of the impact of the expenditures on the economy. Although the cash basis of accounting has only limited use in the planning, implementation and appraisal of programmes, it has the important merit of being ideally suited for financial and monetary analysis, for appreciating the budgetary position in terms of surplus and deficit budgets, etc. For most of the administrative type of governmental expenditures where substantial amount is in respect of salaries and allowances, cash accounting would be quite adequate. It is, however, not suitable for measuring progress of capital projects since most of such projects are spread over a number of years and cash disbursements during a particular year would often tend to inflate their cost with reference to the work done in that year. Similarly, it will not be quite suitable for the commercial, industrial and trading activities of government. Under cash accounting, transactions are recorded only when the disbursments for goods and services are made irrespective of the time when they were ordered or received or consumed.

Under the obligation approach, transactions are recorded when orders are placed or commitments made without regard to the fact as to when the goods and services are received or paid for or consumed. Such a method in combination with cash basis has some relevance for appropriation and fund control, but has only limited value for most of the governmental transactions including projects. The ordering of the goods or services though involves a commitment, does not mean much in real terms so far as governmental activities are concerned or the execution of programmes and projects.

Under the accrual basis, transactions are recorded when the goods and services are received even though they might not have been paid for or consumed. Under this approach, cognizance is taken of inventories, prepaid items, outstanding charges, etc. This kind of accounting is generally used in transactions involving purchase and sale of commodities, construction and operation of projects, and generally in the activities of a commercial nature.

An extension of the basis of accrual accounting is accrued costing under which the total cost of a given programme or project is recorded so as to bring together all legitimate cost pertaining to a particular scheme or project incurred during a given year, inclusive of all direct and indirect charges. Such a basis of accounting the total cost enables the working out of unit costs.

The above mentioned types of accounting have different utility in different circumstances. In selecting an appropriate method of accounting, due consideration should be given to the needs and requirements of the situation, availability of suitable trained personnel and resources. For a major part of government transactions, the existing cash basis of accounting will be all right. However, in course of time, accrual basis of accounting will have to be developed in respect of industrial, commercial and trading activities of Government. Accrual accounting is not a prerequisite for performance budgeting in respect of usual governmental services.

DEMAND STRUCTURE AND PERFORMANCE BUDGETING

Performance Badgeting needs to be sustained by timely accounting and physical data. The work of accounting reforms taken up by the Team set up by the Government of India is expected to be completed shortly. With new heads of account along functions, programmes and activities and rationalisation of sub-heads, the structure of the Demands for Grants submitted to the Legislature for obtaining its vote/appropriation will also become more purposeful. In the absence of the needed accounting changes, the performance budgets being prepared and presented now are only additional supplementary documents to the conventional budget. In fact, if accounting changes are brought about as discussed earlier, more then 50 per cent of the work towards introducing performance budgeting may be said to be over. All that will be needed then is the gradual development of techniques and methods of measurement of physical performance so that cost of individual programmes and activities could be related to work to be done or services to be rendered. For this purpose proper studies of each Department/Organisation are to be made and appropriate ways devised to select work units, develop data and formulate norms and yardsticks. A meaningful Information and Reporting System is vital in this connection. It may be mentioned here that even under performance budgeting, the Demands for Grants (following the revised account heads) will continue to be the basis for legislative sanction. Performance budgets will form an integral part of the Demands. In other words, for each Ministry/Department, there would be separate parts in which the first part will be the Demand (as rationalised) and the second part will be the performance budget. (See in this connection, the first Report of the Team submitted with Shri A. K. Mukherji's D.O. No. 158-ARC/31-71 dated 16-10-71 for further details). The Demands for Grants, as proposed to be rationalised, and the performance budgets will together constitute the budget in future, as and when final decisions are arrived at on the Team's recommendations.

ANNEXURE

INTEGRATED CLASSIFICATION STRUCTURE—AN ILLUSTRATION

Social and Community Services (Broad Sector or Service Area)

↓

Medical & Health Services (Sub-sector or Functional Area)

↓

Public Health (Department, Function, Major Head)

↓

Control of Communicable Diseases (Programme, Minor Head)

↓

Directorate of Communicable Diseases (Organisation, Group Head)

↓

Salaries
Wages
Travel Expenses
Materials and Supplies
Grants-in-aid, etc.
} (Objects of expenditure, Sub-heads, Units of Appropriation)

Malaria Eradication Programme (Sub-programme, Group Head)

↓

Officer-in-charge, M.E.P. (Sub-organisation, Sub-group Head)

↓

Salaries
Wages
Travel Expenses
Office Expenses
Materials and Supplies
etc.
} (Objects of Expenditure, Sub-heads, Units of Appropriation)

DDT Spraying (Activity, Sub-group Head)

↓

Salaries
Wages
Travel Expenses
Office Expenses,
etc.
} (Objects of expenditure; Sub-heads, Units of Appropriation)

NOTE—To what extent details of schemes and items of expenditure should be exhibited in the Demands for Grants has been dealt with by the Team of Officers in their First Report on Demands for Grants submitted to Government in October 1971. They have suggested some financial limits. Final decisions are awaited.

4

Physical Measurement and Analytical Aspects

Performance budgeting seeks to co-relate the financial and physical aspects of each programme and activity with a view to establishing a meaningful relationship between the inputs on the one hand and output on the other. The first stage in the development of a performance budget for an organisation, therefore, is the evolving of a suitable classification structure along programmes and activities in relation to the objectives of the organisation. This aspect has been discussed in Chapter 2. The accounting support needed for this has been covered in Chapter 3. Measurement of actual physical performance in relation to the work plan or the targets laid down in a manner that will help decision making and control at the various levels of management is, however, the most important aspect in the use of a performance budget. The primary objective is to obtain physical measures of work done, services rendered, or results accomplished, in order to bring about a pertinent relationship with the use of resources and to provide data that will help in formulating budget proposals and their review during implementation.

PROBLEMS AND LIMITATIONS

In the format of a performance budget (discussed and illustrated in Chapter 5), the physical aspects of programme targets and achievements are explained with supporting data in Part III—Explanation of Financial Requirements. When once the programmes/activities of an organisation are determined with their costs, the crucial job is in relating the financial outlays to physical targets and programme of action, wherever possible, so as to measure performance and evaluate the efficiency of operations. In its ultimate application, the technique of performance budgeting, therefore, envisages selection of suitable work units for physical measurement of work done or services rendered and gradual development of appropriate ratios to reflect how effectively resources are utilised. In the early stages of the development of a performance budget for an organisation, one should, however, recognise that there would be problems in developing work measurement techniques. It is important to remember that any system of work measurement must be carefully thought out and not hastened through. Any programme of work measurement is also likely to encounter resistance from the line staff. In the beginning stages, therefore, efforts

should be limited to evolving minimum measures of workload statistics in important programme areas. On the basis of experience, action can be taken, in course of time, to develop refined systems of work measurement and performance ratios for better analysis and decision making. The lack of adequate data regarding physical measures need not stand in the way of gradual introduction of performance budgeting. Similarly, development of norms, yardsticks and standards, which is necessary for determining the efficiency of operations, would also pose problems in the beginning. Notwithstanding the absence of norms and standards or adequate data, an organisation could initiate action to prepare performance budget and to generate data over a period. An effective information and feed-back system is vital to have the necessary data for analysis and decision-making in the budgetary cycle of formulation, implementation, control and appraisal (see Chapter 6).

It is also necessary to recognise that not all governmental operations are susceptible of any satisfactory system of physical measurement. It may not always be possible to measure the 'output' of an organisation, either because the output cannot be properly defined and quantified, or because of various other factors. For example, in a statutory Board, the number of Members is determined by the statutory provisions. There is no point here in trying to measure the work of each of the Members of the Board. Similarly, one cannot obviously measure the work involved in direction and policy making. Again, certain programmes or works are unpredictable in nature, as in the case of basic research. In some other cases, the objective of a programme may be such, that the governing criteria is not the workload involved, but the area to be covered, such as a Registrar's office in every Taluq or a police station in every village. When this is the case, there is no great advantage in attempting sophisticated work measurement and analysis techniques. However, even in such 'non-measurable' areas, the staff time utilised on the work and the cost involved could be related and compared from year to year. This is particularly the case in respect of many of the governmental activities of a purely routine or service nature, where there are no 'end products' or 'output' as such. Here, along with data on the staff time spent and the volume of work performed in significant areas, it is possible to control and review their budgetary requirements. This approach in measuring work done is known as the 'workload approach'. A few illustrations are given below indicating the workload approach.

WORKLOAD APPROACH

ILLUSTRATIONS :

(*a*) *Mass Education, Information and Extension (Family Planning)**

Sl. No. (1)	*Item of Work* (2)	*Work Chart* *1970-71* (3)	*1971-72* (4)	*1972-73* (5)
1.	Cinemas, dramas and other related programmes	1,567	2,050	2,050
2.	Conference and meetings	12,084	5,390	5,400
3.	Group meetings	15,105	1,32,000	1,35,000
4.	Hoardings and paintings	1,839	500	500
5.	Publication of literature	...	76	76
6.	Extension including Riksha plates, cinema slides etc.	13,054	8,044	8,050
7.	(*a*) Press Advertisement	...	16	16
	(*b*) Press notes/articles	...	60	60
	(*c*) Radio programme (plays, dialogues, interviews, symposium etc.)	...	400	400
	(*d*) State level functions	...	3	3
	(*e*) Press parties	...	4	4
	(*f*) Kavi darbars	...	...	12
	(*g*) Photo and exhibition/clipping	...	25	25
	(*h*) News papers clipping daily	...	360	360

*1. *Source* : Performance Budget, 1972-73, Family Planning, Government of Punjab.

2. The Department could improve the workload table further by showing targets in respect of 1970-71 and 1971-72 along with achievements.

After indicating the workload both in respect of the current year, one or two past years and the expected load for the next year, another table is to be given regarding staff deployed.

Designation (1)	*No. of sanctioned posts on 31st March, 1971* (2)	*No. of sanctioned post on 31st March 1972* (3)	*Posts required during 1972-73* (4)
Mass Education and Information Officers	11	11	11
District Family Planning Education Officers	22	22	24
Family Planning Extension Educators	123	123	123
Family Planning Field Workers	480	480	502
Technical Assistants and Others	51	51	51

(*b*) *Medical Education and Care (Medical Department)**

S. No.	Item	Victoria Jubilee Hospital, Amritsar 1970-71	1971-72	1972-73 (anticipated)
(1)	(2)	(3)	(4)	(5)
1.	Number of beds	701+205†	701+205†	701+205†
2.	Number patients admitted	29,500	30,000	35,000
3.	Number of patients discharged	27,500	28,500	32,000
4.	Number of patients day care in the Hospital : adults	1,36,900	1,38,000	1,39,000
	Number of Children and New born	26,400	27,000	28,000
5.	Average percentage of beds occupied	100	100	100
6.	Average length of stay	7 days	7 days	7 days
7.	O.P.D. attendance New	1,64,233	1,70,000	1,80,000
	Old	1,42,000	1,50,000	1,60,000
8.	Number of operation Major	16,137	17,250	17,500
	Minor	7,350	7,600	8,000
9.	Number of medical officers (Both from Medical College and V. J. Hospital)	193	195	200
10.	Number of Emergency Admission	2,500	5,000	4,000
11.	Number of Laboratory tests	92,500	1,05,900	1,10,000
12.	Number of X-Rays	45,000	50,000	50,000
13.	Medical Stores consumed (X-Ray, drugs and Medical equipment)	5,50,000	7,00,000	7,50,000
14.	Electricity and Water charges	1,70,000	2,75,000	1,86,000
15.	General Stores (Non-Medical and Equipment) and Consumable Stores	3,50,000	3,75,000	3,85,000

*1. *Source* : Performance Budget 1972-73, Medical Department, Government of Punjab.

2. This table follows a suitable write up about the programme as a whole, its aims, objectives, etc., as well as detailed justification for funds in terms of work to be done.

†These are in addition to sanctioned beds provided to meet the great pressure on the hospital.

(*c*) *Sericulture (Industries)**

S. No.	Item of Work	Target 1970-71	Achievements 1970-71	Target 1971-72
(1)	(2)	(3)	(4)	(5)
I.	Supply of disease—free seeds—from Berigal and Talavadi Grainage (Rs. in lakhs)	4.00	5.70	5.00
II.	Reeling of Cocoons—quantity reeled (in Kgs.)	27,000	28,000	35,000
III.	Demonstration farms—number of farms	12	12	10
IV.	Chawkie farms—number of farms	5	5	5
V.	Supply of mulberry cutting, etc. :			
	(1) Quantity supplied (cartloads)	1,000	1,012	3,000
	(2) Value (Rs. in lakhs)	0.25	0.13	0.35
	(3) Number of sericulturists to whom supplied	500	506	1,000
VI.	Supply of rearing appliances :			
	(1) Value of the appliances (Rs. in lakhs)	0.10	0.11	0.25
	(2) Subsidy (Rs. in lakhs)	100	105	250
VII.	Financial aid given :			
	(1) Loan (Rs. in lakhs)	0.10	0.19	0.50
	(2) Subsidy (Rs. in lakhs)	0.10	0.25	0.50
VIII.	Large scale silk farms :			
	(1) Number of farms	3	2	3
	(2) Area under mulberry cultivation in acres	920	787	1,050
IX.	Nurseries :			
	(1) Number of nurseries	2	2	2
	(2) Value of cuttings, etc., supplied to sericulturists (Rs. in lakhs)	0.66	3.27	0.60
X.	Silk twisting unit :			
	Quantity of Silk finished (kgs.)	460	556	1,100

*1. *Source* : Performance budget 1971-72, Industries Department, Government of Tamil Nadu. The table could be improved upon by giving the targets and achievements for the year 1969-70 also.

2. The table is preceded by a write up explaining the aims and objectives of the programme and giving suitable explanations justifying the funds asked for in terms of work.

Under performance budgeting, adequate data needs to be developed for each programme or activity in order to justify the funds asked for. The basic thing as already stated, is to clearly specify the objective or purpose of each programme and activity, determine their relative costs and relate the outlay to work done or proposed to be done. The most elementary but universally applicable method of relating work done to expenditure proposed is the 'workload approach' illustrated above. For each activity, suitable units of workload are to be selected indicative of the range of work in important areas. Examples of workload units would be number of reports received, number of reports disposed, number of tax returns received, number of tax returns scrutinised, number of labour disputes settled, number of persons trained, number of instructors employed, number of trees planted, number of patients treated, tonnes of garbage cleared, acres cultivated and so on. These workload units expressed as volume of work done in the last two or three years, in the current year and the anticipated load in the coming budget year, together with the staff deployed will indicate the trend in changes in work volume in relation to staff employed. As manpower constitutes the major input in many activities, such data along with suitable ratios showing number of units per man day or number of man days per unit would prove useful in budget formulation and review. In a way, all work done in a governmental operation is susceptible of being quantified in one way or the other. It is also possible to lay down norms and standards and to fix targets for work. These targets on the basis of output standards should be watched during implementation.

Under the workload approach, data could be given either on workload volume, or volume of work and cost or volume of work, cost and time. The type of data that is to be generated for control purposes depends on the type of organisation involved and the need for the same at appropriate levels. Workload indices would show either the volume of work done or the effect of the work done or the accomplishment as such depending on the level for which the data is intended. At higher levels, management is concerned more with work accomplishment and less with either the effect of work or the volume of work, while at supervisory levels the management is more concerned with the volume of work and its effect and less with the overall accomplishment. At the operating levels, the executive is primarily concerned with volume of work done in relation to their assigned task.

Performance budgeting aims at judging the efficiency of operations. The efficiency of operation of an organisation can be measured against certain pre-determined standards, norms and targets and also by comparison with similar operations undertaken by other organisations both in the public and private sector. The efficiency can also be measured over a period of time.

PRODUCTIVITY FACTORS

Apart from workload factors, which, as stated earlier, are the minimum needed to explain programme requirements and fund variations, efforts should be made to develop meaningful productivity and performance ratios indicating the relationship between inputs and outputs. These ratios are useful in analysing and interpreting the utilisation of resources (men, material, machinery, land, etc.) in terms of amount produced. They are more widely applicable in the case of manufacturing and industrial activities, whether run departmentally or through enterprises, though in other areas also, such ratios could be developed with advantage.

The programme and activity classification (*i.e.* the base) under performance

budgeting is related to the administrative structure of an organisation. Broadly speaking, a programme denotes a higher level of organisation and an activity, the lower operating levels. By establishing a relationship between outputs and inputs at programme level, where outputs generally result in some end-products, it is possible to develop what are termed 'productivity ratios'. For this purpose, outputs may be related to one or more or all the inputs. The establishment of output-input relationship at lower levels of operation, where physical turn out reflects the achievement of specific works or tasks, leads to the development of 'performance ratios'. If the total cost of all inputs used in carrying out an operation or activity is related to the volume of output, one gets unit-cost data. This again is more feasible in the case of industrial, manufacturing or commercial operations than in the administrative types of activities. If the data regarding inputs are limited to the utilisation of staff time (man-hours; man-days, etc.), the ratio is called 'Work Measurement Ratio'. It will also be useful to compare them with standard norms to be evolved gradually.

In the format of a performance budget (see Chapter 5) all these indices of performance, such as workload factors, performance ratios, unit-cost data, etc., are brought out while explaining each programme or activity under Part III—Explanation of Financial Requirements. A few typical examples are illustrated below.

ILLUSTRATION A

*National Malaria Eradication**

The split up of the financial requirements of the National Malaria Eradication Programme under attack and consolidation and Maintenance Phase is as follows:

	Revised Estimates 1969-70			*Budget Estimates 1970-71*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
National Malaria Eradication Programme						
Attack and Consolidation	131.13	12.76	143.89	133.80	13.52	147.32
Maintenance	3.28	12.50	15.78	6.57	12.50	19.07
Total	134.41	25.26	159.67	140.37	26.02	166.39

This programme was a centrally aided scheme up to 1968-69 but since April, 1969, it has been categorised as a cent percent Centrally Sponsored Scheme under the Fourth Five Year Plan (1969-70 to 1973-74) with the exception that expenditure up to the level of 1957-58 (when the control programme was under operation) would be met by the State Government as committed liability under Non-Plan expenditure, which has been assessed as Rs. 12.76 lakhs by the Director of NMEP, Delhi. The activities under maintenance phase are also financed from the non-plan budget of the State except for strengthening the basic health services for which central assistance is obtained under the plan.

**Source* : Performance Budgets of Selected Departments, 1970-71, Government of Rajasthan, Medical and Public Health Schemes.

This programme aims at reducing the morbidity rate and to reduce the incidence of Malaria in the State. The following table shows the progress in this regard :

Year	*Incidence per 1000 population*
1959	0.33
1965	0.133
1967	1.09
1969	0.06

In 1967, out of total 16.67 NMEP Units in the State, 5.85 units entered into Maintenance Phase and 9.11 units to consolidation phase. The programme was rephased in the light of setbacks with the following units in different phases :

	1967-68	*1968-69*	*1969-70*
1. Attack Phase—Partial Surveillance	0.00	8.92	8.92
2. Attack Phase—Full Surveillance	1.74	4.00	4.00
3. Consolidation Phase	9.11	0.35	0.25
4. Maintenance Phase	5.82	3.40	3.50
	16.67	16.67	16.67

NOTE—A unit on an average comprises of 1.35 million population in Rajasthan.

The need for rephasing the activities of NMEP Units came up due to sudden upsurge in the number of Malaria cases from 1966 onwards reaching a peak in 1967-68. The main factors responsible for it have been the failure of timely availability of insecticides and anti-malarial medicines, shortage of technical staff due to ban on appointments, apathy of local bodies to institute anti-larval measures to control Urban malaria and reluctance of people in cooperating with spraying schedules of the programme.

The table on page 37 indicates the physical targets and achievements for the year 1969-70 and programme for 1970-71.

The following table gives the position of staff engaged on this activity :

		1968-69	*1969-70*	*1970-71*
A. State level	(1) State Malariologist	1	1	1
	(2) State Entomologist	1	1	1
	(3) Supporting Staff	66	66	54
B. Zonal level	(1) A.D.H.S.	4	4	4
	(2) Supporting Staff	28	28	40
C. Unit level				
(*i*) Attack & Consolidation	(1) Malaria Medical Officer	1	13	13
	(2) Supporting Tech. Staff	2,101	1,667	1,696
	(3) Ancillary	260	262	265
(*ii*) Maintenance Phase	(1) Addl. Distt. Health Officer	4	4	4
	(2) Supporting Tech. Staff	827	688	688
	(3) Ancillary Staff	76	55	55

Tasks	*Units*	*1969-70*				*1970-71*		*Remarks*
		Targets		*Achievement*		*Targets*		*Reasons of Shortfall*
		Attack & consolidation Phase	*Maintenance Phase*	*Attack & consolidation*	*Maintenance Phase*	*Attack Phase*	*Maintenance Phase*	
1. D.D.T. Spraying	No. of houses sprayed	34,70,480 in each round	Focal spray for positive cases	25,13,255	Focal spray done in positive cases	35,81,363	Focal spray for positive cases	Due to scarcity of water in drought affected districts, worn out old vehicles and non-availability of labour in some areas the spray round could not be completed to achieve the total coverage.
2. Surveillance Operations								
(*a*) Collection of blood slides from fever cases and examination of slides	No. of blood slides collected and examined	18,85,000	2,78,750	12,49,921	2,06,263	11,05,000	2,78,750	The shortfall of the target was due to reduction of 584 posts of Surveillance workers and Basic Health workers during the year.
(*b*) Treatment of Malaria cases	No. of cases treated	...	...	15,232	224	...	...	

ILLUSTRATION B

*Family Planning Programme**

	Revised Estimates 1969-70	*Budget Estimates 1970-71*
Services and Supplies	147.40	179.37

The following is the break-up of the provision under this activity :

	Revised Estimates 1969-70			*Budget Estimates 1970-71*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
(*i*) District F.P. Bureau	38.34	...	38.34	40.00	...	40.00
(*ii*) Rural F.P. Centres	72.52	...	72.52	76.00	...	76.00
(*iii*) Urban F.P. Centres and Sterilization	15.87	...	15.87	17.31	...	17.31
(*iv*) Awards and Incentives	16.00	...	16.00	32.00	...	32.00
(*v*) Estt. of Post-Partum Centres	0.50	...	0.50	5.67	...	5.67
(*vi*) Immunisation of Infants and Expectant Mothers	1.13	...	1.13	0.11	...	0.11
(*vii*) Intensive Distt.	1.04	...	1.04	4.40	...	4.40
(*viii*) Addl. beds for female Sterilization operations	2.00	...	2.00	3.88	...	3.88

Priority and urgency has been attached to implementation of Family Planning Programme at all levels, but the under-developed means of transport and communication and frequent drought conditions and the low level of literacy are some of the barriers in this State in implementation of its programme. Population of the State is about 202 lakhs (1961 census) and male and female in reproductive age group are about 55 lakhs and 41 lakhs respectively. The Government of India have fixed a Uniform target of 3.9 sterilization operations, 1.8 IUCD insertions and 6.3 Users of conventional contraceptives per thousand population. Targets have also been fixed accordingly. The following table shows the coverage of eligible couple protected under the scheme :

Percentage of eligible couples currently protected by Family Planning Methods	*By the end of 31st March*		
	1968	*1969*	*1970*
(*a*) By Sterilization	3.00	4.3	5.5
(*b*) By Insertion of IUCD	1.8	1.8	2.00

**Source* : Performance Budgets of Selected Departments, 1970-71, Government of Rajasthan, Family Planning Programme.

Progress of Setting Up of Centres

During the first ten years of the programme, emphasis was laid in establishing service facilities in the State. By the end of the third five year plan, 55 Urban Family Planning Centres, 232 Rural Family Planning Centres, 23 Mobile Units and 61 Static Sterilization Units were established. In the year 1967-68, the Family Planning Machinery at State and District level was strengthened. Sub-centres were opened in Rural areas. These sub-centres are attached with the main centre at P.H.C. level. In the year 1968-69, the Government sanctioned 80 additional beds for female sterilization in 8 hospitals. The present position of service facilities under Family Planning Programme in the State is given in the following table :

Items	*As on 31st March*		
	1969	*1970*	*1971 Expected*
District Family Planning Bureaus	26	26	26
Rural Family Planning Welfare Centres	232	232	232
Urban Family Planning Centres	60	60	60
Mobile Sterilization Units	26	26	26
IUCD Centres	62	62	62
State Sterilization Units	61	61	61
Oral Contraceptive Distribution Centres	16	16	16
Post Partum Centres	—	3	3

Position of staff engaged for Service and Supplies is as under :

Items	*Number of posts sanctioned during*		*Proposed for 1970-71*
	1968-69	*1969-70*	
(*i*) District Family Planning Officers	26	26	26
(*ii*) Administrative Officers	26	26	26
(*iii*) Medical Officers	463	463	463
(*iv*) Para-Medical Staff	1,593	1,594	1,594
(*v*) Family Planning Welfare Workers	120	120	120
(*vi*) Other Ministerial and Subordinate Staff	353	357	357
(*vii*) Class IV Servants	960	960	960

The Family Planning Programme is gaining momentum in the State. Special fortnights and special drives are being observed to gear up the programme. Such intensified efforts helped in accelerating the tempo of work. The table on page 40 shows the progress of Family Planning work in the State.

Sl. No.	Particulars	Progress since inception to 1967-68	1968-69				1969-70*				1970-71	
			Targets	Performance	Targets per 1000 population	Performance per 1000 population	Targets	Performance	Targets per 1000 population	Performance per 1000 population	Targets	Target per 1000 population
1.	Sterilization	88,825	1,50,235	37,830	6.5	1.5	82,500	43,519	3.2	1.6	1,03,300	3.9
2.	IUCD Insertions	52,622	1,00,157	21,060	4.0	0.8	38,700	22,349	1.5	0.9	47,500	1.8
3.	Conventional Contraceptives ...		1,50,235	22,028	6.0	0.8	1,10,800	37,995	4.3	1 5	1,67,300	6.2
			Persons Users									
	(a) Condoms	14,24,244		9,20,418				21,33,024				
	(b) Diaphgrams	1,17,777		1,199				893				
	(c) Jelly/Cream	85,772		19,625				18,126				
	(d) Foam Tablets	12,18,959		4,17,747				4,03,150				

*Provisional

ILLUTRATION C

*Operation of Bus Services**

Prior to the present policy of nationalisation, the department was mainly running buses in the city and suburbs of Madras and a few services were run on longer routes. Quite a number of services nationalised are of a short length and are similar to the suburban services already run by the department. The department had therefore to classify all the services into categories depending upon the type of operation. The Madras Branch is operating City, District and Express services and they have since been classified. As the classification could not be done earlier, the accounts could be prepared only for the Madras Branch as a whole.

	Revised Estimate, 1970-71	*Budget Estimate (Revised)*, 1971-72
	(RUPEES IN LAKHS)	
Madras Branch	1,787.24	1,996.85
Kanyakumari Branch	338.13	377.07

The estimates include a capital outlay of Rs. 298.58 lakhs during 1970-71 and Rs. 345.50 lakhs during 1971-72. The capital outlay is mainly for acquisition of buses both for augmentation of the fleet and replacement of overaged vehicles. The bulk of the cost of replacement is finaced from the Depreciation Reserve Fund. The other items are lands and buildings, plant and machinery and other departmental vehicles. The operational and maintenance cost, accounts for 65 per cent of the total expenditure of the department. The quantum of provision and the basis for the provision for various items of expenditure are analysed below :

MADRAS BRANCH

Capital Outlay

	Revised Estimate, 1970-71	*Budget Estimate (Revised)*, 1971-72
	(RUPEES IN LAKHS)	
Buses	213.83	245.60
Lands and Buildings	28.00	31.00
Tools and Plant	6.00	5.00
Total	247.83	281.60

**Source* : Performance Budget, 1971-72, Transport, Government of Tamil Nadu.

The capital outlay of Rs. 213.83 lakhs under 'Buses' is for acquiring 289 buses, out of which 154 are intended for replacement and the balance for augmentation including nationalisation. The augmentation on the existing routes would require 65 buses. Similarly 135 buses will be the net addition to the fleet during 1971-72.

The life of a vehicle is fixed as indicated below :

Make	*Life* (YEARS)	*Mileage* (LAKHS)
Leyland Comet	6	2.50
Benz	6	2.25
Fargo	4	1.25

The department is not replacing the vehicles immediately the scheduled period is completed. Some of the buses are retained till they complete one more year. The average life is 6½ years.

As on 1st April 1970, the department had 249 overaged vehicles in addition to vehicles due for replacement during 1970-71. It is proposed not to retain any vehicles which are over seven years. Accordingly, 205 vehicles will be replaced during 1970-71 and 245 vehicles during 1971-72.

Based on the above addition, the fleet of the Madras Branch will grow as indicated below :

As on 1st April 1970	1,671
As on 1st April 1971	1,806
As on 1st April 1972	1,951

Lands and Buildings

The outlay is Rs. 28 lakhs during 1970-71 and Rs. 31 lakhs during 1971-72. The above outlay provides for construction of depots at Anna Nagar, Ashoknagar, Vyasarpadi and Kanchipuram and housing colonies at Madras and Coimbatore besides other works.

Tools and Plant

The provision for the entire department during the year 1970-71 is Rs. 8 lakhs and Rs. 6 lakhs for 1971-72. The bulk of the provision is for the Madras Branch. The provision covers purchase of plant and machinery and other vehicles. A major item covered by the provision for the year 1970-71 is the acquisition of nine jeeps and wireless equipment for organising a mobile squad for attending to breakdowns on line without any loss of time.

The estimate for 1971-72 provides for purchase of machinery and other departmental vehicles required.

Working Expenses

Revised Estimate 1970-71	*Budget Estimate (Revised)*, 1971-72
(RUPEES IN LAKHS)	
1,539.41	1,715.25

The working expenses are for the operation of services. As on 31st March 1970 this branch was operating 913 services in the city and suburbs, 450 services on mofussil routes and 153 on express routes.

The working expenses are broadly classified under operation, maintenance and other indirect costs including depreciation, interest, provident fund and gratuity and other miscellaneons charges.

	Revised Estimate, 1970-71	*Budget Estimate (Revised)* 1971-72
	(RUPEES IN LAKHS)	
(*i*) *Operation cost*	8,94.38	9,99.36

The operation cost consists of wages of traffic crew, motor vehicles taxes and fuel, and tyres. The driver and conductor are employed with reference to the norms of 2.5 per bus under each category. The provision includes salary of traffic supervisory staff. Tax is paid with reference to the rates under the Motor Vehicles Tax Rules. The rates are different for city and district routes.

There are also norms for consumption of fuel and tyres. Based on these norms and the scheduled mileage per bus and the scheduled number of buses to be operated, the expenditure is estimated.

The expenditure per bus in 1970-71 is indicated below :

	Rs.
(1) Wages of traffic crew	16,167
(2) Taxes	13,146
(3) Fuel, tyres	23,082

	Revised Estimate, 1970-71	*Budget Estimate (Revised)* 1971-72
	(RUPEES IN LAKHS)	
(*ii*) *Maintenance*	2,94.21	3,23.73

This includes cost of materials consumed and labour engaged for daily maintenance, B.C. repairs, annual overhaul and heavy repairs carried out at the Central workshops for the vehicles in all the depots. The labour is engaged with reference to the norms prescribed. Based on the norms, the expenditure per bus on labour and materials consumed works out to Rs. 6,900 and Rs. 10,076 respectively.

	Revised Estimate, 1970-71	*Budget Estimate (Revised)*, 1971-72
	(RUPEES IN LAKHS)	
(*iii*) *Depreciation*	178.11	200.00

The vehicles and other assets of the department are depreciated on the straight line method at the rates indicated below :

	PER CENT
BUSES	
Leyland Comet	16-2/3
Benz	16-2/3
Fargo	25
Buildings	4
Plant and Machinery	10
Workshop Equipment	33⅓
Lorry	20

The estimate represents the actuals for assets acquired up to 31st March 1970 and the average cost of additions during 1970-71 and 1971-72.

	Revised Estimate, 1970-71	*Budget Estimate (Revised)*, 1971-72
	(RUPEES IN LAKHS)	
(*iv*) *Interest on capital*	101.60	115.60

This represents interest at the rates prescribed by the Government worked out on the net borrowings as on 1st April 1970 and the probable borrowings during 1970-71 and 1971-72.

	Revised Estimate, 1970-71	*Budget Estimate*, *(Revised)*, 1971-72
	(RUPEES IN LAKHS)	
(*v*) *Provident Fund, etc.*	27.70	30.00

The employees of the department other than ministerial and supervisory staff are eligible for the Tamil Nadu Industrial Employees' Contributory Provident Fund and the departmental gratuity scheme. Under Provident Fund Rules, the employees are eligible for a Government contribution at 8 per cent on Pay and Dearness Allowance. The fund is maintained by the State Government.

Under the gratuity scheme, the employees are eligible for gratuity at the rate indicated below :

(1) Employees recruited before 1st June 1960	One month's basic pay per year of service.
(2) Employees recruited after 1st June 1960	Half month's basic pay per year subject to a maximum of 15 months' pay.

The ministerial and supervisory staff are now governed by the Madras Liberalised Pension Rules and eligible for admission to the Madras General Provident Fund Rules.

KANYAKUMARI BRANCH

Capital Outlay	*Revised Estimate*, 1970-71	*Budget Estimate (Revised)*, 1971-72
	(RUPEES IN LAKHS)	
Buses	43.24	54.40
Lands and Buildings	6.51	9.00
Tools and Plant	1.00	0.50
	50.75	63.90

This branch directly controls the operation of suburban services, town services and district services emanating from Kanyakumari district. The transport is almost fully nationalised in this district. Some of the services operated in the adjacent district are also attached to this branch for administrative convenience. At the end of 1970-71, this branch was operating 290 services.

During 1971-72, the fleet will be increased to 329 to meet the requirement of augmentation on the existing suburban and district routes.

This branch also maintains express services but the cost of maintenance is transferred to the Madras Branch.

Buses

The capital outlay is for the augmentation and replacement of 66 buses during 1970-71 and 60 buses during 1971-72. The augmentation is 15 buses during 1970-71 and 10 buses during 1971-72. The cost of replacement is mainly financed from the Depreciation Reserve Fund. Benz vehicles alone are used in this unit. The growth of fleet in this branch is indicated below :

As on 1st April 1970	304
As on 31st March 1971	319
As on 31st March 1972	329

Lands and Buildings

The oulay is Rs. 6.51 lakhs during 1970-71 and Rs. 9 lakhs during 1971-72. The outlay during these years provides for expenditure on construction of additional buildings for the tyre retreading section at Nagercoil and housing schemes besides other works.

Tools and Plant

The provision under this head is Rs. 1 lakh during 1970-71 and Rs. 50,000 during 1971-72. This is towards the purchase of machinery and equipment for utilisation in the maintenance depots.

	Revised Estimate, 1970-71	*Budget Estimate (Revised),* 1971-72
	(RUPEES IN LAKHS)	
Working Expenses	2,87.38	3,13.17

This is broadly classified under operation costs, maintenance costs and other indirect charges which include depreciation, interest, provident fund, gratuity and other miscellaneous charges.

The provision for 1970-71 and 1971-72 has been made taking into account the factors explained in the case of services in Madras Branch. The details of cost are furnished below :

	Revised Estimate, 1970-71	*Budget Estimate (Revised),* 1971-72
	(RUPEES IN LAKHS)	
1 Operation cost	1,82.61	2,00.27
2 Maintenance	59.60	67.87
3 Depreciation	25.46	26.00
4 Interest on Capital	8.70	8.70
5 Provident Fund and Gratuity ...	3.80	3.85

The table shows the past achievements and estimates for 1971-72 for Madras and Kanyakumari Branches

Operation of Bus Services—Achievement and Estimates

	1969-70		*1970-71*		*1971-72*	
	Madras	*Kanya-kumari*	*Madras*	*Kanya-kumari*	*Madras*	*Kanya-kumari*
1 Fleet at the beginning of the year	1,651	295	1,671	304	1,806	319
2 Fleet at the end of the year	1,671	304	1,806	319	1,951	329
3 Average fleet	1,662	299	1,707	312	1,878	324
4 Buses put on road	1,426	265	1,488	276	1,635	285
5 Percentage of 4 to 3	86	87	87	88.6	87	88
	(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)	(Per cent)
6 Total earnings (Rs. in lakhs)	1,399.47	259.35	1,483.81	278.78	1,604.14	294.66
7 Total expenditure (Rs. in lakhs)	1,452.77	256.91	1,559.04	288.95	1,735.72	314.79
8 Net	—53.30	+2.44	—75.23	—10.17	—131.58	—20.13
9 Earning per service per annum Rs.	84,204	86,739	86,925	89,350	85,416	90,944
10 Expenditure per service per annum Rs.	87,411	85,932	91,332	92,612	92,424	97,157
11 Kilometreage (in lakhs)	15,78.35		17,20.15		19,51.51	
12 Kilometreage per bus per annum	80,490		85,200		88,620	

NOTE—The above table could be made more useful by adding a few more indices of performance relevant to judge operational efficiency at a higer level, such as receipt and expenditure per bus k.m., mileage per litre, breakdowns per 10,000 kilometer, etc.

ILLUSTRATION D

RS. IN LAKHS

Primary Education	*Budget* 1971-72	*Revised Budget* 1971-72	*Budget* 1972-73
	14.50	12.50	18.55

The Constitution of India envisages free and compulsory education to children in the age group 6-11 years. The enrolment of children at present in this State is 60 per cent. It is proposed to increase this to 65 per cent by the end of the Fourth Plan. The important schemes under this programme and the provision proposed are as under :

(*a*) Maintenance of Existing Schools	12.00	12.00	13.00
(*b*) Opening of New Schools	2.00	—	5.00
(*c*) Mid-day Meals	0.50	0.50	0.55
Total	14.50	12.50	18.55

(*a*) *Maintenance of Existing Schools*

Total number of existing schools is 100. Approximate running expenditure on a school is about Rs. 12,000 per annum. This is as per norms of expenditure laid down. The increase of Rs. 1 lakh next year is mainly due to normal increments, additional D.A. and rising cost on account of electricity, water rates and contingent expenditure.

Year	*Number of Schools*	*Enrolment*	*Teachers*	*Percentage of enrolment to population in 6-11 age group*	*Teacher-pupil ratio*	*Cost per pupil (approx.)*
1970-71	98	9,800	400	59	1 : 25	Rs. 123
1971-72	100	10,000	410	60	1 : 24	Rs. 120
1972-73	100	11,000	420	62	1 : 26	Rs. 118

(*b*) *Opening of New Schools*

In the current year, a provision of Rs. 2 lakhs was made for the setting up of 4 new schools. However, due to paucity of resources, this had to be given up. For the coming year, a provision of Rs. 5 lakhs has been proposed for opening 10 new schools at an approximate cost of Rs. 50,000 each. The break-up is as follows:

Building	Rs. 30,000	
Furniture, etc.	Rs. 5,000	
Teachers (4 per school)	Rs. 9,600	(at an average cost of Rs. 200 p.m. per teacher)
Contingencies, etc.	Rs. 5,400	
Total	Rs. 50,00	

The building work is expected to be complected by July 15, 1972 and regular classes from August 15th. Building work is to be done by the State PWD for which necessary sanctions have been issued.

(*c*) *Mid-day Meals*

This Scheme is run in collaboration with CARE. At peresent 80 schools (about 8000 children) are covered by this scheme. For the next year, 10 more schools (1000 children) are proposed to be covered. Cost per child per year comes to about Rs. 6 which represents only freight and admininstrative charges. The scheme is being intensified to cover all children by the end of the of the Fourth Plan.

Year	*Expenditure (Rs. lakhs)*	*Number of Schools covered*	*Number of children covered*	*Cost per child (Rs.)*
1970-71	0.42	70	7,000	6.00
1971-72	0.50	80	8,000	6.25
1972-73	0.55	90	9,000	6.00

NOTE—The above write-up regarding Primary Education is purely illustrative to indicate how a programme of this type could be briefly explained in the broad performance budget meant for top level, *i.e.*, Legislature and Government. The facts and figures are only imaginery and their validity is not, therefore, to be questioned as regards consistency, etc. This could be one of the programmes of a State Education Department.

The several physical measures and ratios mentioned earlier are to be used in varying degrees in different situations. Whether a simple workload statistics device is to be developed in combination with staff time used, or more refined methods of productivity and performance ratios are to be used, will depend on the type of work or services, the organisations involved and the facilities available. Basic to the measurement of physical performance, however, is the selection of the most appropriate unit or units of work measure. This has to be done with great care in each individual case to reflect and convey effectively the whole range of operations of an organisation. In addition to being representative of the total effort put on the work, the units selected should be used consistently over a period. They should be easily understood and should be capable of being aggregated and summarised at each successive levels of control in management.

UNIT COST APPROACH

Unit-Cost information enables more complete and informed management decisions. Unit-Cost approach is, however, to be used with caution, as quite distorting pictures would emerge in case it is universally applied without regard to the nature of operations or its applicability. This could be used with advantage in repetitive production operations resulting in homogeneous products, but not otherwise. Also, wherever it is used as a device for control, one should take into consideration various factors vitiating absolute comparisons. Application of unit costing is illustrated below. In the case of repetitive processes, it will also be possible, for better control, to have standard unit costs with which actuals could be compared.

ILLUSTRATION **A**

*Delhi Milk Scheme**

1. Procurement

This activity involves the procurement of both raw milk and the procurement of milk powder and butter for reconstituting them into milk. The milk so procured is collected in 20 Chilling Centres and thereafter it is transported by tankers to the Central Dairy. The quantity of milk, milk products and butter procured during the last six years is given below :

Milk

Year	*Total procurement in litres*	*Average per day*	*Average procurement price per litre*	*Average collection expenditure per litre (paise)*
1965-66	5,16,40,879	1,41,482	72.78	7.15
1966-67	6,28,42,714	1,72,144	76.23	6.91
1967-68	5,78,24,067	1,57,989	95.62	7.6
1968-69	6,10,06,839	1,67,142	97.29	8.96
1969-70	7,20,17,769	1,97,310	95.66	8.47
1970-71	6,28,28,497	1,72,133	100.58 (E)	8.50 (E)
1971-72 (Budgetted)	8,10,78,510	2,21,526	107.24 (E)	8.50 (E)

Milk Powder

Year	*Quantity procured (M.T.)*	*Average Price Rs./(M.T.)*
1965-66	1,706.76	2,024.93
1966-67	850,84	2,765.02
1967-68	1,108.99	3,232.33
1968-69	3,419.69	2,694.78
1969-70	2,963.87	1,888.40
1970-71	3,490.60	3,606.30 (E)
1971-72 (Budgetted)	4,900.00	4,550.00

**Source* : Performance Budget of Selected Organisations, 1971-72, Government of India, Department of Agriculture.

Butter/Butter Oil

Year	*Qty. procured (Kgs.)*	*Average price Rs./Kg.*
1968-69	13,150 (W.B.)	12.25
1969-70	3,45,456 (W.B.)	11.17
1970-71	4,59,511 (Butter Oil) 28,000 (W.B.)	9.67 11.17 (E)
1971-72 (Budgetted)	15,00,000 (Butter Oil)	9.87

2. Processing

The quantity of milk (excluding cow milk) processed for the last 6 years is indicated below :

Year	*Qty. processed in litres*	*Average per day*	*Processing cost*	*Average processing cost per litre*
1965-66	5,55,93,875	1,52,312	39,80,521	7.16
1966-67	7,26,44,864	1,99,027	44,82,188	6.17
1967-68	7,96,54,564	2,17,635	54,64,303	6.86
1968-69	8,09,15,850	2,31,087	58,50,216	7.23
1969-70	10,53,72,769	2,88,693	79,02,958	7.50 (E)
1970-71	9,86,20,137	2,70,192	76,43,061	7.75 (E)
1971-72 (Budgetted)	12,65,78,000	3,45,842	98,09,795	7.75 (E)

Basically 3 varieties of milk are produced in the Plant. They are standardised milk, tonned milk and double tonned milk. The quantity produced in respect of these is indicated below :

Year (1)	*Qty. produced* (2)	*Average per day* (3)	*Production cost* (4)	*Production cost per litre (paise)* (5)
		Standardised Milk		
1965-66	3,26,11,791	89,347	2,63,24,238	80.72
1966-67	4,81,44,178	1,31,902	4,05,18,140	84.16
1967-68	4,81,68,760	1,31,609	5,06,10,916	105.07
1968-69	4,90,78,638	1,34,462	5,28,92,050	105.77
1969-70	7,13,33,357	1,95,434	7,18,68,357	100.75 (E)
1970-71	6,27,42,871	1,71,898	6,99,52,027	111.49 (E)
1971-72 (Budgetted)	9,33,10,000	2,54,945	10,88,46,115	116.65 (E)

(1)	(2)	(3)	(4)	(5)
		Tonned Milk		
1965-66	1,84,65,451	50,590	1,19,47,147	64.70
1966-67	1,68,21,736	46,087	1,10,36,744	65.61
1967-68	2,28,78,327	62,509	1,90,11,889	83.10
1968-69	2,48,68,806	68,134	2,09,59,430	84.28
1969-70	1,87,85,459	51,465	1,42,03,685	75.61 (Estimated)
1970-71	3,17,77,402	86,239	2,84,36,685	90.34 (Estimated)
1971-72	2,85,00,000	77,896	2,66,39,744	93.44 (Estimated)
		Double Tonned Milk		
1965-66	45,16,633	12,374	23,12,064	51.19
1966-67	76,78,950	21,038	42,88,694	55.85
1967-68	86,07,477	23,518	58,36,730	67.81
1968-69	69,68,406	19,092	47,76,842	68.55
1969-70	52,53,953	14,394	30,53,597	58.12 (Estimated)
1970-71	43,99,864	12,054	33,99,335	77.26 (Estimated)
1971-72 (Budgetted)	47,58,000	13,000	37,49,780	78.81 (Estimated)

Details of other milk products produced are given below :

Butter, White Butter & Table Butter

Year		*Qty. produced (Kgs.)*	*Average per day*	*Average cost of production per Kg. (Rs.)*
1965-66	W.B	6,71,072	1,839	9.12
	T.B.	3,98,715	1,092	8.40
1966-67	W.B.	6,37,010	1,745	9.12
	T.B.	5,41,391	1,483	8.40
1967-68	W.B.	4,13,123	1,129	10.84
	T B.	1,88,715	516	10.56
1968-69	W.B.	6,21,821	1,704	11.24
	T.B	1,37,877	378	10.68
1969-70	W.B.	9,07,497	2,486	11.27 (Estimated)
	T.B.	1,62,994	447	10.73 (Estimated)
1970-71	W.B.	6,54,389	1,793	9.55 (Estimated)
	T.B.	1,15,008	315	9.10 (Estimated)
1971-72 (Budgetted)	T.B.	2,50,000	683	10.75

NOTE—Major portion of white butter produced is used for production of ghee.

Year	*Qty. produced (Kgs.)*	*Average per day*	*Average production cost per Kg.*
		Ghee	
1965-66	5,20,094	1,425	11.32
1966-67	4,99,810	1,369	11.32
1967-68	1,92,999	527	13.73
1968-69	3,66,483	1,004	14.26
1969-70	6,14,839	1,684	13.00 (Estimated)
1970-71	3,03,197	831	11.00 (Estimated)
1971-72 (Budgetted)	2,50,000	683	12.50
		Roller Dried Milk (Kg.)	
1965-66	2,26,622	621	—
1966-67	2,64,588	725	—
1967-68	2,02,380	553	—
1968-69	2,06,450	566	—
1969-70	2,28,110	625	—
1970-71	2,63,330	719	—
1971-72 (Budgetted)	3,00,000	820	—
		Ice Cream (In C.C.S.)	
1965-66	1,34,26,400	36,785	—
1966-67	1,07,68,725	29,503	—
1967-68	3,00,70,800	82,161	—
1968-69	2,71,15,810	74,290	—
1969-70	1,91,83,600	52,558	—
1970-71	68,79,375	18,848	—
1971-72 (Budgetted)	60,000 (Kgs.)	164 (Kgs.)	—

3. *Distribution*

The Delhi Milk Scheme has at present 78 vehicles for distribution of the milk bottles at 1046 booths located all over Delhi and Greater Delhi. The total quantity of various types of milk sold in the various booths during the last 6 years and the

total sales turnover indicating at the same time, the cost per litre of distribution is indicated in the table below :

(Rs. in lakhs)

Year	*Total Qty. sold in litres*	*Total Sales turnover*	*Cost of distribution per litre in paise*
1965-66	5,90,51,876	388.67	4.62
1966-67	7,26,80,263	528.81	4.61
1967-68	8,03,44,779	609.18	5.04
1968-69	8,30,87,184	762.08	5.78
1969-70	9,38,47,383	1,000.10	5.50 (E)
1970-71	9,65,19,594	997.33	5.75 (E)
1971-72 (Budgetted)	12,73,10,000	1,368.92	5.75 (E)

The number of bottles handled during the last 5 years is also indicated below :

Year	*No. of bottles*
1965-66	20,18,070
1966-67	23,80,376
1967-68	25,37,666
1968-69	26,05,765
1969-70	29,44,224
The number of milk token issued by the Scheme (upto 31st January 1971)	3,85,458
Waiting list of applicants as on March, 1970	42,988

4. Administrative Expenses

The administrative expenses of the Scheme, *i.e.*, the expenditure on the pay and allowances of officers (and certain other charges which cannot directly be allocated to any of the activities mentioned above) for the last 5 years, together with the cost per litre of milk on the basis of the quantity of milk processed during each of the year is indicated below :

Year	*Administrative expenses*	*Qty. of milk processed*	*Cost per litre (paise)*
1965-66	18,20,405	5,72,25,006	3.18
1966-67	20,12,396	7,40,66,681	2.72
1967-68	28,90,912	8,29,58,446	3.48
1968-69	31,02,979	8,38,83,465	3.70 (E)
1969-70	39,20 938	10,59,94,203	3.70 (E)

Financial Review—A review of the working of the Scheme during the last 5 years reveals that the Scheme had been running at a loss upto 1968-69 and showed a profit in the year 1969-70. The loss/profit figure of the last 5 years is given below :

Year	*Loss in Lakh Rs.*	*Profit in Lakhs Rs.*
1965-66	39.21	—
1966-67	14.66	—
1967-68	146.71	—
1968-69	76.42	—
1969-70	—	73.34

The loss is mainly due to the fact that the selling price has not been sufficiently high to meet the cost of procurement of milk, its processing and other overheads. The table below indicates the cost of production of various types of milk broken into various components comprising the cost from year to year as also the selling price from year to year showing the loss per litre.

(In paise per litre)

Year	*Raw material including procurement charges*	*Processing cost*	*Distribution cost*	*Overheads including interest & depreciation*	*Total cost*	*Selling price**
			Standardised Milk			
1965-66	64.54	7.16	4.40	4.62	80.72	
1966-67	69.31	6.17	4.61	4.07	84.16	
1967-68	88.26	6.86	4.91	5.04	105.07	
1968-69	89.70	7.23	5.78	5.06	107.77	
			Tonned Milk			
1965-66	48.52	7.16	4.40	4.62	64.70	
1966-67	50.76	6.17	4.61	4.07	65.61	
1967-68	66.29	6.86	4.91	5.07	83.10	
1968-69	66.21	7.23	5.78	5.06	84.28	
			Double Tonned Milk			
1965-66	35.01	7.16	4.40	4.62	51.19	
1966-67	39.00	6.17	4.61	4.07	53.85	
1967-68	51.00	6.86	4.91	5.07	67.81	
1968-69	50.48	7.23	5.78	5.00	68.55	

(In Rupees)

**Type of Milk*	*1.11.1959*	*13.5.1964*	*5.6.1965*	*12.11.1965*	*26.12.1967*	*22.2.1969*
1. Buffalo Milk	0.62	0.70	(Discontinued w.e.f. 5.5.1965)			
2. Standardised Milk			0.70 (w.e.f. 10.6.65)	0.84	1.04	1.16
3. Cow's Milk	0.62	0.70	0.70	0.84	1.04	1.16
4. Tonned Milk	0.42	0.44	0.54	0.54	0.74	0.84
5. Double Tonned Milk	...	...	0.40 (w.e.f. 1.6.1965)	0.40	0.50	0.60

ILLUSTRATION B

*Off-Shore and Deep See Exploratory Fishing/Training**

The off-shore and deep sea exploratory fishing and practical training and demonstration of modern technology ashore and at sea are two of the most important activities of this organisation. As such cost per unit of an hour of off-shore and deep sea exploratory fishing as well as the unit cost of trainee for different courses has been worked out and furnished in the following tables for 1969-70, based on actual expenditure, and for 1971-72 based on Budget Estimates :

Unit cost of various activities of the Project 1969-70

(1) Unit cost per hour of off-shore and deep sea exploratory fishing during 1969-70

Total charge	Rs.	14,51,000
Less receipts		5,28,400
Net cost		9,22,600
Total hours of operation—5719		
Cost per hour of operation	Rs.	161

(2) Unit cost per trainee during 1969-70

Total cost under this head		11,59,000
Deduct 50 per cent towards demonstration		5,79,500
		5,79,500
Less receipts		3,96,300
Net cost of training		1,83,200

(*a*) Fishing Second Hands and Engine Drivers

Cost for 20 hands (35%)		64,120
Cost per trainee	Rs.	3,206

(*b*) Freezing Plant Operator

Cost for 12 hand (15%)		27,480
Cost per trainee	Rs.	2,290

(*c*) Processing Technician

Cost for 15 hand (15%)		27,480
Cost per trainee	Rs.	1,832

(*d*) Service Mechanics

Cost for 12 persons (15%)		27,480
Cost per trainee	Rs.	2,290

(*e*) Boat Designers

Cost for 7 hands (10%)		18,320
Cost per trainee	Rs.	2,617

**Source* : Performance Budgets of Selected Organisations, Government of India, Department of Agriculture, 1971-72, Indo-Norwegian Project, Ernakulam (Extracts relating to Unit Cost only.)

(*f*) Purse Seine Matter

Cost for 8 hands	Rs.	18,320
Cost per trainee	Rs.	2,290

Statement showing unit cost of each metric ton of ice produced 1969-70

1. Direct expenses on ice-plant per month	Rs.	625.00
2. Direct wages on ice-plant per month		2,827.00
3. Depreciation cost of building and materials		3,484.00
4. Interest on capital		1,007.00
5. Maintenance and repairs		1,104.00
Total cost per month		9,047.00
Total cost per year		1,08,564.00
Total production of ice during 1969-70		3,147 M. tonnes
Cost per ton of ice		34.50
Cost of electricity and water per ton not included in direct expenses		9.10
	Rs.	43.60

(say Rs. 44 per metric ton of ice).

Unit cost of various activities of the Project based on accepted budget estimate for 1971-72

1. Unit cost per hour of off-shore and deep sea exploratory fishing during 1971-72

Total charge as per Table I	Rs.	15,11,000
Less receipts	Rs.	3,90,000
Net cost		11,20,000
Total hours of operation		7000
Cost per hour of operation	Rs.	160.00

2. Unit cost per trainee during 1971-72

Total cost under this head as per Table I	14,12,000
Deduct 50 per cent towards demonstration	7,06,000
	7,06,000
Less receipts	4,62,350
Net cost of training	2,43,650

(*a*) Fishing Second Hands and Engine Drivers

Cost for 23 hands (30%)	73,095
Cost per trainee	3,178

(*b*) Freezing Plant Operator

Cost for 25 heads (25%)	60,912
Cost per trainee	2,436

(*c*) Processing Technician	
Cost for 25 hands (20%)	48,730
Cost per trainee	1,949
(*d*) Service Mechanics	
Cost for 24 persons (20%)	48,730
Cost per trainee	2,030
(*e*) Purse-Seine Matter	
Cost for 6 hands (5%)	12,183
Cost per trainee	2,030

Statement showing unit cost of each tonne of ice produced as per estimated cost during 1971-72

1. Direct expenses on ice-plant per month	Rs.	1,425.00
2. Direct wages on ice-plant per month	Rs.	3,827.00
3. Depreciation cost of building and materials		3,484.00
4. Interest on capital		1,007.00
5. Maintenance and repairs		2,004.00
Total cost per month		11,747.00
Total cost per year		1,40,964.00
Total estimated production of ice during 1971-72		4000 tonnes
Cost per tonne of ice		35.24
Cost of electricity and water charges per tonne of ice not included in direct expenses		9.40
		44.64

(Say Rs. 45 per tonne.)

NOTE—Corresponding position for 1970-71 should also have been given and the above data presented in a tabular form so as to show comparative position year after year.

SOME BASIC CONSIDERATIONS

Apart from the use of workload and other relevant data on performance for a systematic appraisal by manngement, output-input relationships conveying the effect or benefit of each programme could also be used to assist higher levels in Government in making hard decisions on alternative courses of action. These relate to the pre-investment stage. A relationship is established between the ultimate benefits to be gained by a particular programme and the overall cost of that programme so as to assess the economic and social benefits expected from competing programmes. These are called by such names as Cost-benefit analysis, Cost-effectiveness analysis, Cost-utility analysis, etc. Though such investment planning and analysis is very necessary as part of the administrative process of decision making, these analytical tools are distinct from performance budgeting concept and technique.

In analysing the performance or productivity ratios, care must be taken to avoid wrong conclusions, as there are many variables. Among them, mention may be made of the following :

(*i*) Substantial difference in volume of work may affect productivity. An organisation handling large volume of work will be using less inputs per unit of work than another that has a low volume of the same work in the same period. Different standards have to be applied for a proper analysis in such cases.

(*ii*) Huge back-log of work and its clearance in a particular period may indicate a higher productivity in the year in which it is cleared.

(*iii*) Improvements in method of work and other organisational innovations will have an impact on performance and productivity.

(*iv*) Geographic locations and local conditions vitiate comparison of similar operations. For example, unit cost of constructing a mile of road in Himachal Pradesh will not be the same, as in Mysore or Bihar.

(*v*) Lastly, performance analysis is essentially quantitative and not qualitative. Therefore, in drawing inferences, this fact should be kept in mind. For example, a fall in road accidents in a year in Delhi should not be taken as a ground for reduction in the traffic police. The fall in road accidents does not also necessarily indicate the quality of work done by the traffic police. Similarly, a fall in the mortality rate due to small pox in a year does not warrant a cut in staff for that programme.

Development of work units and appropriate norms and standards is as important as it is difficult. Where they are not forthcoming now, steps will have to be taken gradually to develop them. In the absence of a system of measurement of physical performance that will provide valuable data for a continuous appraisal of performance by management, performance budgeting will not yield the results expected of it. A meaningful information and reporting system is vital in this connection.

5

The Format of a Performance Budget

As mentioned earlier, performance budgets are to be prepared for each department or organisation for various levels and not for each function of government. The objectives and functions of a given department/organisation are first analysed and its programmes and activities determined. These programmes and activities are then displayed in a systematic manner with a view to relating their financial and physical aspects in one comprehensive document. The structure of a performance budget as recommended by the Administrative Reforms Commission and as accepted by the Government has three parts—I. Introductory, II. Financial Requirements and III. Explanation of Financial Requirements.

THE THREE PARTS

The Introductory part is meant to convey briefly the aims and objectives of the department/organisation, its range of work, broad organisational structure and the assignment of responsibilities. This Part is to give a brief idea of the origin, set up, authority, scope and objectives of the organisation concerned so as to enable one to have a broad insight into the functioning of the department.

The second Part deals with the budgetary requirements in financial terms. In addition to the estimates for the ensuing budget year, the table in this Part will show the actuals of the last year, budget of the current year and the corresponding revised estimates for the current year. This would be as per the practice prevailing now. The presentation will be in three dimensions—one displaying the requirements of the department by purpose (*i.e.*, by programmes and activities), the other showing the total expenditure by objects of expenditure and the third indicating the source of funds to carry out the purposes. It has, therefore, three sections : A. *Programme/Activity Classification* showing the range of work classified into meaningful categories by programmes and activities; B. *Object-wise Classification*, giving a different angle in terms of broad items of expenditure groupings, such as establishment charges, travel, stores, grant-in-aid, machinery, equipment, loans, etc.; and C. *Sources of Financing* indicating the several Demand Numbers and Major Heads under which the outlays for the programmes and activities are included in the appropriation

structure and from which funds would be available for spending after due process of law. The totals of the three sections A, B and C will be the same, as the same total expenditure provision would be displayed in different manner. The programme/activity classification facilitates the measurement of work in relation to the purposes and objectives of the organisation. The object-wise classification helps in identifying the various inputs that have gone into the various programmes and activities. The sources of financing merely brings together the individual Demands and Major Heads where the expenditure is provided for. As stated already, the details under programmes/activities, *i.e.*, their sub-division, or the break-up of object-wise groupings could be as required for each level of control. As the level goes down, the details of programme as well as object-wise classification will be more elaborate to serve management needs of control.

The third Part relating to Explanation of Financial Requirements is important, as it is here that an attempt is made to relate expenditure provisions in terms of programmes and activities to work proposed or services to be rendered or things to be accomplished. Necessary justification has to be given by means of pertinent physical data for the budgetary requests explaining also past performance. A performance budget becomes meaningful and useful to management only if this part is properly developed. To the extent necessary physical data about targets, achievements, workload, etc. is not supplied or a proper co-relation between financial outlays and physical targets is not made. the document will fall short of a performance buget. Workload and measurement aspects and the importance of developing proper data for control and appraisal have been explained in Chapter 4.

EXAMPLES

The format of a performance budget is given at page 62. The two examples will illustrate the scope and content of each of the three parts referred to above. It may be mentioned here that the examples have been given purely to illustrate the approach. It is not intended that what is given there is the ideal one. There is certainly scope for lot of improvement. It would be useful to study the illustrations and recognise the deficiencies in the attempt made by the departments, bearing in mind, however, the fact that it is a *summary budget for top level, i.e.* presentation to Parliament/Legislature (Some of the deficiencies have been pointed out by way of notes at appropriate places).

ILLUSTRATION A

Monitoring Organisation (Ministry of Communications) Performance Budget 1971-72*

I. Introduction

The Monitoring Organisation, a subordinate organisation of the Department of Communications, assists the Wireless Planning and Coordination Wing of the Department of Communications in the task of carrying out frequency management and enforcement of national and international regulations, licensing conditions and other monitoring work. It has eleven monitoring stations at Delhi, Nagpur, Bombay,

**Source* : Performance Budget of Organisations under the Ministry of Communications, Government of India, 1971-72.

FORMAT OF A PERFORMANCE BUDGET

PERFORMANCE BUDGET OF 'X' DEPARTMENT FOR THE YEAR 1972-73

I. *Introduction*

x x x x x
x x x x x

II. *Financial Requirements*

A—*Programme/Activity Classification**

(Rs. in lakhs)

	Accounts 1970-71			Budget Estimates 1971-72			Revised Estimates 1971-72			Budget Estimates 1972-73		
	P.	NP.	T.	P.	NP.	T.	P.	NP.	T.	P.	NP.	T.
1.												
2.												
3.												
4.												
Total A												

B—*Objectwise Classification*

Establishment charges
Travel
Office Expenses
Stores, etc.
Total B

C—*Sources of Financing*

1. Demand No. (Major Head...)
2. Demand No. (Major Head...)
etc.
Total C

III. *Explanation of Financial Requirements*

In this Part, each programme/activity will be explained with necessary data, etc., to justify funds asked for. Past performance is also to be given. Targets and achievements in the last year and the current year should be given along with programme for the budget year. The type of data, workload factors, indices of performance will all depend on the nature of the activity.

NOTE—P=Plan; NP=Non-Plan; T=Total.

*It is necessary to show Plan and non-Plan break-up in our special context, though in performance budgeting, an activity is considered as a whole, whether Plan or Non-Plan.

Again, under each programme/activity, the Revenue and Capital component should be distinctly shown, as for example,

	Actuals 1970-71	*Budget Estimates 1971-72*	*Revised Estimates 1971-72*	*Budget Estimates 1972-73*
	P. NP. T.	*P. NP. T.*	*P. NP. T.*	*P. NP. T.*
1. Fertilizers & Manures				
Revenue				
Capital				
Loans etc.				
2. etc.				
3.				

Calcutta, Madras, Gorakhpur, Srinagar, Shillong, Ajmer, Ahmedabad and Hyderabad. The Wireless Adviser to the Government of India is the Head of the Organisation.

The Fourth Five Year Plan envisages the development and further expansion of the Monitoring Organisation at an estimated expenditure of Rs. 1 crore during the Plan period. The main features of the Plan are establishment of 12 fixed monitoring stations, 3 field stations and facilities for detection of unauthorised transmissions, measurement of manmade interference, inspection units, etc.

An annual plan of Rs. 16 lakhs (excluding expenditure on civil works) has been approved for 1971-72, *i.e.*, the third year of the Fourth Five Year Plan.

The targets indicated in the annual plan are the same as those indicated in the third year of the Fourth Five Year Plan. The total number of monitoring channels at the various monitoring stations that would be established by 1971-72 are as follows :

Year	*Fixed Technical and General*	*Fixed Special*	*Mobile*
1970-71	20	1	9
1971-72	21	4	10

Inspection units are to be established at Delhi, Nagpur, Madras, Bombay and Calcutta with a team of two officials. A Radio noise survey unit has also to be established at Delhi.

The monitoring station at Delhi is engaged in the task of developing sophisticated type of equipments. This activity will continue during 1971-72. The items being developed at present are log-periodic-antenna, for V. H. F., omni-directional antenna for M.F./H.F. bands, frequency comparators (transistorised versions) auto-scanning units, F.S.K. converters, and V.S.W.R. meters, resulting in considerable saving of foreign exchange.

II. *Financial Requirements*

(Rs. in lakhs)

	Actual Expenditure 1969-70	*Revised Estimate* 1970-71	*Budget Estimates* 1971-72
(1)	(2)	(3)	(4)
A. *Programme/Activity Classification*			
(*a*) Administration	0.63	0.73	0.86
(*b*) Operation and Maintenance (Monitoring)	21.59	28.88	32.96
Total A	22.22	29.61	33.82

(1)	(2)	(3)	(4)
B. *Object-wise Classification*			
Establishment charges (Office and Operational Staff)	12.06	13.76	17.00
Travel	0.19	0.20	0.21
Maintenance and Replacement and Contingencies	2.38	3.05	3.20
Equipment and Stores	7.38	11.94	12.52
Vans	—	0.40	0.48
Other Charges	0.21	0.26	0 41
Total B	22.22	29.61	33.82
C. *Sources of Financing*			
Demand No. 94	22.22	29.61	33.82

(The increases in Budget Estimate 1971-72 over Revised Estimate 1970-71 are as a result of increased requirements on operation and maintenance in the Third Year of the Plan).

(NOTE—1. The Budget Estimates for 1970-71 should also have been given.

2. Under each year, Plan and non-Plan break-up should be indicated. If, however, the entire provision is either Plan or non-Plan, a footnote to that effect should have been added).

III. Explanation of Financial Requirements

(Rs. in lakhs)

	Revised Estimate 1970-71	*Budget Estimate 1971-72*
(*a*) Administration	0.73	0.86

This represents the pay and allowances of the Head of the Office,* the Administrative Officer and such other officers and staff of the Organisation as are engaged in running the administration and maintaining cash, budget, accounts and house-keeping, etc.

	1970-71 (Revised)	*1971-72 (Anticipated)*
Number of Officers	2	3
Number of Staff	15	19
Percentage of Expenditure on Administration to Total Budget	2.46	2.54

(NOTE—The write-up could be amplified. The staff table should show the position in 1969-70 also).

*Head of the office also looks after the operational part of Monitoring Organisations Works.

(Rs. in lakhs)

	Revised Estimate 1970-71	*Budget Estimate 1971-72*
(*b*) Operation and Maintenance	28.88	32.96

The amount under this activity consists of the working expenses of the Organisation and its monitoring stations in maintaining and discharging the monitoring activities. Some of the relevant workload are indicated in the following table :

Year	*Monitoring Work Done (Channel Days)*						*No. of infringements detected by various stations*	*No. of cases of assistance to user Department*	*No. of stations identified*
	*1**	*2**	*3**	*4**	*5**	*Total*			
1969-70	523	4,330	638	924	40	6,455	5,677	4,872	49,000
1970-71 (Estimated)	500	4,500	800	1,150	50	7,000	6,200	5,000	58,000
1971-72 (Anticipated)	500	5,100	1,000	1,340	60	8,000	6,750	5,500	65,000

*1. Participation in International Monitoring Programme on behalf of I.T.U.
*2. Technical Monitoring of wireless user for checking technical Parameters.
*3. Detection of un-authorised wireless transmissions.
*4. General Monitoring including interference monitoring, occupancy and vacancy checks, etc.
*5. Assistance to users furnished directly.

The staff position is indicated below :

	1970-71	*1971-72*
Number of Officers	22	26
Number of Staff	320	376

(NOTE—The department could elaborate further the write up and data on staff. As it is, the programme is not adequately explained).

ILLUSTRATION B

Agriculture Department (Performance Budget, 1972-73) Punjab*

I. Introductory

The Punjab is predominantly an Agricultural Economy State. The total geographical area is 50.38 lakh hectares out of which 40.53 lakh hectares is cultivated and total cropped area is 56.78 lakh hectares. The cropping intensity for the year 1970-71 works out to be 140 per cent which is highest in the country. The net irrigated area is 28.88 lakh hectares which forms 71.22 per cent of the net cultivated area which too is highest in the country.

Experience has shown that Industrial Development does not come until a Nation can feed and clothe its people. Where high percentage of population live in rural areas, larger national production efforts are expanded on Agriculture, which permits :

(*i*) higher level of nutrients for the entire rapidly growing population :

(*ii*) saving of substantial amounts of foreign exchange where food and raw materials are imported; and

(*iii*) new source of National Income by exporing marketable surplus crops.

Encouraged with the previous results of increased production, a bold programme has been framed for execution during 1972-73 as indicated below :

(*Figures in thousands*)

Targets Commodity	Unit	4th Plan		Achievements		Targets	
		Original	Revised	1969-70	1970-71	1971-72	1972-73
(*i*) Foodgrains	Tonnes	75,00	80,00	69,22	73,06	75,73	78,00
(*ii*) Cotton	Bales	10,00	10,50	8,01	8,19	9,20	9,60
(*iii*) Sugarcane	Tonnes	6,50	6,00	6,18	5,27	6,30	6,00†
(*iv*) Oil-seeds	Tonnes	4,00	4,00	2,33	2,43	3,60	3,70

For carrying out the development programmes the Department of Agriculture executes various schemes to take advantage of the modern methods of agriculture and

*Source : Performance Budgets of Selected Departments, 1972-73, of Punjab Government.

†In view of low price of sugarcane, the area and production has decreased substantially.

evolve a long term programme of action which would have the objectives given below :

(*i*) increasing productivity and distribution of food and Agricultural Products;

(*ii*) raising levels of nutrition and standards of living, in particular ameliorating the conditions of small farmers and agricultural labour; and

(*iii*) increasing the capability of present system of rural supplies and services.

Green Revolution

(*i*) Wheat is the major food crop covering an area of 2.3 million hectares out of total cropped area of 5.678 million hectares. Latest technique and remarkable level of adoptability to different climates and agronomic conditions of short duration high yielding varieties and the potential created in the first three plans made it possible to step up wheat production by 402 per cent in 1970-71 over base year of 1950-51. The bumper wheat harvest is confirmed from the market arrivals of 31.06 lakh tonnes (31st March, 1971) which contribute more than 75 per cent to the Central Pool.

(*ii*) Similar to wheat a great break-through has been witnessed in rice production. The production of rice has stepped up by 543 per cent in 1970-71 over the base year of 1950-51. Up to 16th January, 1972, a total of 12.90 lakh tonnes of paddy arrived in the markets. The Punjab State will contribute 7.5 lakh tonnes of Rice in the Central Pool out of 43 lakh tonnes of the country as a whole. The Punjab State will be able to produce 15 lakh tonnes of Rice in the two crop harvests. It is felt that the tempo of 'Green Revolution' which is just around the corner could be sustained and further extended with intensive efforts of the Department in collaboration with other allied Departments and Institutions. Activities are summarized in the succeeding paragraphs.

The Director of Agriculture is the head of the organisation and he is assisted at the State Headquarters by a group of technical officers incharge of various programmes. The State has been divided into 12 Agricultural Districts. The work in the district is supervised by a District Agricultural Officer. There are two circles. Each circle is under the charge of a Deputy Director of Agriculture, who guides and supervises the implementation of the various agricultural programmes. The District Agricultural Officer/Pilot Project Officer prepares the detailed programmes and supervises the implementation of the programmes in the Community Development Blocks. At the block level, the Extension Officer (Agriculture) is incharge of the Agricultural Programmes and he is assisted by village level workers and gram sewaks. It is proposed to integrate the working of all the various sections of the Agriculture Department at the district level under one Chief Agricultural Officer posted at the district level.

In Intensive Agriculture Development Programme districts of Ludhiana, Ferozepur and Sangrur, the Pilot Project Officer assisted with Subject Matter Specialist in various disciplines executes the various development schemes for agricultural production.

The Agricultural Research and Education are mainly conducted by the Punjab Agricultural University Ludhiana, since December, 1962.

II—FINANCIAL REQUIREMENTS

(Figures in thousands)

Serial No.	Programme and Activity Classification	Accounts 1970-71			Budget Estimates 1971-72			Revised Estimates 1971-72			Budget Estimates 1972-73		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(11)	(13)	(14)
1	Direction, Supervision, and Administration ...	95	27,97	28,92	1,06	28,58	29,64	93	28,87	29,80	1,84	32,63	34,47
2	Improved Seeds and Seed Farms ...	66	28,12	28,78	2,12	43,90	46,02	83	33,29	34,12	1,82	30,76	32,58
3	Intensive Agricultural Development Programme, (High Yielding Varieties Programme, Intensive Agricultural Development Programme, Intensive Cotton District Programme and Multiple Cropping) ...	48	32,53	33,01	23,85	33,22	57,07	15,12	33,88	49,00	21,95	41,94	63,89
4	Development of Commercial Crops ...	19,54	21,78	41,32	37,74	22,79	60,53	59,24	21,87	81,11	1,87,98	24,84	2,12,82
5	Development of Horticulture ...	11,47	18,48	29,95	28,87	19,59	48,46	23,32	17,52	40,84	65,48	21,84	87,32
6	Plant Protection and Pest Control ...	6,28	46,84	53,12	31,60	70,02	1,01,62	29,74	76,85	1,06,59	45,25	1,28,98	1,74,23
7	Agricultural Implements and Machinery ...	6	3,97	4,03	18	5,48	5,66	14	4,17	4,31	3,05,20	6,70	3,11,90
8	Fertilizers and Manures ...	2,41	4,00	6,41	6,32	3,34	9,66	3,54	4,42	7,96	6,61	4,49	11,10
9	Agricultural Information Services including Farmers Education and Training ...	3,62	15	3,77	7,69	6	7,75	6,31	6	6,37	14,08	25	14,33
10	Agricultural Marketing & Warehousing ...	6,06	93	6,99	7,98	2,07	10,05	7,27	2,02	9,29	31,90	2,36	34,26
11	Agricultural Statistics	1,08	2,13	3,21	6,32	2,09	8,41	4,28	2,13	6,41	4,75	2,23	6,98
12	Research and Education (Grant-in-aid to Punjab Agricultural University and Khalsa College,	35,74	1,41,39	1,77,13	72,45	1,50,14	2,22,59	72,33	1,50,14	2,22,47	72,45	1,50,14	2,22,59
	Total item (1–12)	88,35	3,28,29	4,16,64	2,26,18	3,81,29	6,07,46	2,23,05	3,75,22	5,98,27	7,59,31	4,47,16	12,06,47
13	Minor Irrigation and Boring of Tubewells : ...												
	(*a*) Ground Water Scheme ...	19,12	3,13	22,25	24,25	3,40	27,65	17,78	3,34	21,12	1,54,17	7,94	1,62,11
	(*b*) Purchase of debentures ...	48,04	...	48,04	50,00	...	50,00	50,00	...	50,00	74,00	...	74,00
	Total Minor Irrigation	67,16	3,13	70,29	74,25	3,40	77,65	67,78	3,34	71,12	2,28,17	7,94	2,36,11
	Total A ...	1,55,51	3,31,42	4,86,92	3,00,43	3,84,69	6,85,11	2,90,83	3,78,56	6,69,39	9,87,48	4,55,10	14,42,58

Note—Revenue and capital break-up could also be suitably indicated in the above Table.

B—OBJECTWISE CLASSIFICATION

(Figures in thousands)

Sl. No.	Particulars	Accounts 1970-71			Budget Estimates 1971-72			Revised Estimates 1971-72			Budget Estimates 1972-73		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	Establishment Charges ...	14,16	99,19	1,13,35	45,51	1,02,43	1,47,94	30,14	1,01,66	1,31,80	65,82	1,14,20	1,80,02
2	Travelling Allowance	1,11	7,06	8,17	3,89	7,40	11,29	2,05	7,03	9,08	5,29	10,62	15,91
3	Subsidy ...	15,93	35	16,28	25,39	5,80	31,19	2,00	13,30	15,30	1,39,80	5,80	1,45,60
4	Produce of Seeds ...	...	10,85	10,85	...	21,33	21,33	...	6,08	6,08	...	13,44	13,44
5	Grants-in-aid ...	35,78	1,41,53	1,77,31	72,48	1,50,20	2,22,68	72,35	1,50,20	2,22,55	72,55	1,50,39	2,22,94
6	Other Charges ...	27,69	30,65	58,34	82,76	32,53	1,15,29	1,13,79	28,26	1,42,05	90,45	87,65	1,78,10
7	Investments ...	53,04	...	53,04	55,00	...	55,00	55,00	...	55,00	5,48,57	...	5,48,57
8	Loans ...	7,80	41,79	49,59	15,39	65,00	80,39	15,50	72,03	87,53	65,00	73,00	1,38,00
	Total B ...	1,55,51	3,31,42	4,86,93	3,00,42	3,84,69	6,85,11	2,90,83	3,78,56	6,69,39	9,87,48	4,55,10	14,42,58

C—SOURCES OF FINANCING

(Figures in thousands)

Demand No.	Major Head of Account	Accounts 1970-71			Budget Estimates 1971-72			Revised Estimates 1971-72			Budget Estimates 1972-73		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
20.	31—Agriculture	94,67	2,88,89	3,83,56	2,28,53	3,18,84	5,47,37	2,17,45	3,05,67	5,23,12	4,24,41	3,30,23	7,54,64
37.	68—Stationery and Printing ...	...	53	53	...	64	64	...	66	66	...	1,04	1,04
39.	71—Miscellaneous—A Cost of Books and Periodicals ...	...	...	...	...	1	1	...	1	1	...	2	2
42.	95—Capital Outlay on Schemes of Agricultural improvement and Research ...	5,00	21	5,21	...	20	20	...	19	19	5,00	31	5,31
43.	96—Capital Outlay on Industrial and Economic Development ...	48,04	...	48,04	55,00	...	55,00	55,00	...	55,00	5,43,57	...	5,43,57
46.	103—Capital Outlay on Public Works ...	...	...	...	1,50	...	1,50	2,88	...	2,88	...	...	...
51.	Q—Loans and Advances by the State Government—Loans to Local Funds, Private Parties, etc. ...	7,80	41,79	49,59	15,39	65,00	80,39	15,50	72,03	87,53	14,50	1,23,50	1,38,00
	Total—C ...	1,55,51	3,31,42	4,86,93	3,00,42	3,84,69	6,85,11	2,90,83	3,78,56	6,69,39	9,87,48	4,55,10	14,42,58

III —Explanation of Financial Requirement

(*Figures in thousand*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
1. Direction, Supervision and Administration	93	28,87	29,80	1,84	32,63	34,47

The expenditure under this head covers the pay, allowances of the staff and contingent charges of the office of the Director of Agriculture, Deputy Directors of Agriculture and District Agricultural Officers.

The Director of Agriculture, is head of the department and he is assisted by 4 Joint Directors of Agriculture and One Director Marketing. All the Joint Directors of Agriculture and Director Marketing have a Statewide jurisdiction and they work on a functional basis. The table below indicates the strength of various categories of staff looking after the work of direction, supervision and administration. The emoluments of the Joint Directors and Director Marketing have been provided under the respective activities :

	1970-71	*1971-72*	*1972-73*
Director of Agriculture	1	1	1
Director Marketing	1	1	1
Joint Directors of Agriculture	2	4	4
Deputy Directors of Agriculture	5	5	5
Accounts Officer	1	1	1
Assistant Accounts Officer	1	2	2
District Agricultural Officers	12	12	12
Other Officers	17	17	20
Ministerial Staff	182	174	174
Other Staff	639	573	575
Class IV Establishment	298	296	296
Total	1,159	1,086	1,091

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
2. Improved Seeds and seed Farms	83	33,29	34,12	1,82	30,76	32,58

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
State Seed Farms ...	...	13,91	13,91	...	11,09	11,09
Purchase and Sale of Improved Seeds	...	6,08	6,08	...	13,87	13,87
Supply of improved seed on subsidized rates in border areas	...	13,30	13,30	...	5,80	5,80
Seed Certificataion	83	...	83	1,82	...	1,82
Total ...	83	33,29	34,12	1,82	30,76	32,58

Seeds are one of the most important inputs for higher level of productivity. The Punjab Agricultural University produce the nucleous seed and distribute to the Punjab Agriculture Department and National Seed Corporation for further multiplication. The foundation seeds thus raised are sold to the progressive growers.

State Seed Farms

There were 81 State Seed Farms with total area of 2044 hectares during the year 1970-71. Thirtynine Farms were under direct cultivation and 42 Farms under tenant cultivation. About 60 uneconomical units covering an area of 887 hectares have been closed during the year 1971-72 and are likely to be disposed of soon. The Department has made alternate arrangement for multiplication of seed at Mattewara farm and at bigger units to be purchased.

Distribution of Improved Seeds

Under the Seed Depot Scheme of the Department seeds are procured after proper tests in the laboratories The procured seeds are futher distributed amongst the cultivators on 'no profit no loss basis', through the field staff. The Punjab State Coopertive Supply and Marketing Federation and National Seed Corporation also arrange sale of seeds.

From all the sources the following seed distribution programme has been planned for the year 1972-73 :

(*i*) Wheat (High Yielding Varieties)	...	21,000	quintals
(*ii*) Rice (High Yielding Varieties)	...	8,000	quintals
(*iii*) Hybrid Maize	...	3,500	quintals
(*iv*) Hybrid Bajra	...	2,500	quintals

Supply of Seeds in Border Area on Subsidised Rates

To keep up the tempo of agricultural production in the border areas of Gurdaspur, Amritsar, and Ferozepur districts, seeds are supplied to cultivators on subsidized rates.

Seed Certification Scheme

The object of the scheme is to set up a departmental agency to certify the quality of seeds produced by private traders and growers and thereby encourage the private agencies in the business of production and distribution of good quality seeds. The scheme is still in its infant stage and is being enlarged during 1972-73 for the proper enforcement of Seed Laws.

At the State level Deputy Director of Agriculture (Seeds) is incharge of the Seed Production Programme. He is assisted by the District Agricultural Officer, who is mainly responsible for the execution of this programme. Supporting staff is provided at each Government Seed Farm and for the certification of seeds at private growers farms. The certified seed from the growers is purchased for further distribution amongst the farmers.

(Figures in thousands)

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
3. Intensive Agricultural Programme	15,12	33,88	49,00	21,95	41,94	63,89

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
Intensive Agricultural Programme	13,12	15,68	28,80	18,67	16,59	35,26
High Yielding Varieties Programme	—	18,20	18,20	...	25,35	25,35
Multiple Cropping	2,00	...	2,00	3,28	...	3,28
Total	15,12	33,88	49,00	21,95	41,94	63,89

Intensive Agricultural District Programme

Despite intensive efforts by way of increasing irrigation facilities, expansion of land under cultivation and inception of Community Development Programme, etc. much head way could not be made for Agricultural Production to keep pace with the needs of the rapidly increasing population. After thorough examination Intensive Agricultural District Programme was started as a focus for Agricultural Development Programme in Ludhiana in April, 1961. An augmented district staff was headed by a Project Officer and supported by Subject Matter Specialists in various disciplines. A systematic programme of educating the farmers through individual contacts, preparation of their farm plans, technical training camps at various levels, scientific demonstration, supply of technical literature, etc. has been undertaken. All these systematic efforts made it possible to achieve the average wheat yield of 32.79 quintals per hectare during 1971. The cropping intensity of 156 per cent in Ludhiana District against 140 per cent of the Punjab State as a whole is also highest in the country.

The experience of spectacular achievement gained in Ludhiana District, has been extended to Ferozepur and Sangrur districts from the year 1971-72.

Pilot Intensive Agricultural Village

A sum of Rs. 1.03 lakh has been provided for the setting up of a model village at Kheowali in Ferozepur District to encourage the farmers to adopt modern agricultural practices necessary for increased production.

High Yielding Varieties Programme

The main plank of the new strategy for increasing agricultural production is the introduction of High Yielding Varieties Programme. Under this programme the

newly identified and evolved high yielding strains of wheat, paddy and hybrids of maize and bajra, which are responsive to high doses of fertilizers were introduced to the farmers. It is envisaged to cover the entire irrigated area under High Yielding Varieties of wheat and paddy. Hybrid Maize has not been accepted by the farmers.

Targets and achievement are given below :

(Figures in thousand hectares)

Crop	1969-70		1970-71		1971-72		1972-73
	Target	Achievement	Target	Achievement	Target	Achievement	Target
Wheat ...	15,03	...	16,02	15,80	16,20	17,00	
Paddy ...	92	...	1,30	1,42	3,03	3,80	
Bajra ...	1,01	...	1,25	1,01	1,01	1,01	
Maize ...	52	...	49	81	36	20	

Multiple Cropping

The multiple cropping is a more intensive system of cropping when no additional area is likely to become available for cultivation. This programme aims at raising the cropping intensities of cultivated lands having sufficient irrigation facilities or assured rainfall by growing more than one crop. The availability of short duration High Yielding Varieties Programmes have opened up vast opportunities for increasing agricultural production through multiple cropping programme. This programme has been started in three blocks, namely, Gurdaspur, Malerkotla and Kot Bhai, where cropping intensity will be raised from 120 to 130, 135 to 145 and 107 to 110, respectively.

(*i*) The total cropped area of the Punjab State as a whole is envisaged to be improved by adding 1.25 lakh hectare area under double cropping during 1972-73.

(*ii*) This programme having gained success will be further extended to three more blocks.

(Figures in thousands)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
4. Development of Commercial Crops	59,24	21,87	81,11	1,87,89	24,84	2,12,82

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
1. Sugarcane	6,24	6,22	12,46	10,47	7,19	17,66
2. Cotton	38,91	11,25	50,16	1,47,58	12,78	1,60,36
3. Oil Seeds	14,09	4,40	18,49	29,93	4,87	34,80
Total	59,24	21,87	81,11	1,87,98	24,84	2,12,82

Sugarcane Development Scheme

The schemes aim at improving the yield and quality of sugarcane in factory areas. The experience has shown that the average yield in factory areas is more by 25 per cent than rest of the State due to the functioning of schemes. In view of great need to run the factories for longer period, the schemes have been strengthened with the provision of more staff and facilities.

The targets and achievements are detailed below :

Sl. No.	Item	Units	1970-71		1971-72		1972-73
			Target	Achievement	Target	Achievement	Taget
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Area under Seed Nurseries	Acres	2,70,00	32,14	27,00	31,00	27,00
2.	Distribution of Seed	Quintals	11,60,00	21,82,67	11,60,00	20,28,72	11,60,00
3.	Distribution of Fertilizer	Tonnes	1,36,00	1,50,80	1,64,00	1,35,21	19,20,00

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4.	Plant Protection Measures (*a*) Soil Treatment (*b*) Seed Treatment (*c*) Spray against whitefly Black bug and Pyrilla, etc.	Acres 000	43	1,91,59	51	1,01,73	Soil 26,000 acres Seed 28,000 acres Spraying/dusting against Pyrilla, Black bug and whitefly etc., and the eradication of Gurdaspur border will be done on campaign basis keeping in view the intensity of attack of the pests at that time.
5.	Average Yield	Tonnes per acre	22,40	17,71	23,60	19,00 (Estimated)	24,80*
6.	Area under Sugarcane	000 acres	1,20	80,89	1,20	78,01	1,20†

Cotton

Cotton is the most important cash crop covering an area of more than 4 lakh hectares with production of 9.20 lakh bales (Estimate 1971-72). The area under cotton in Punjab is 5.3 per cent of the total area of this crop in India, whereas the production is 15.3 per cent (1969-70). Cotton is very much receptive to fertilizers application and plant protection measures. Having realized the shortage of cotton to the extent of 7.8 lakh bales valued at about Rs. 90 crore the State Government in collaboration with Government of India started special projects to improve the yield and quality of cotton. The figures detailed below indicate the progress made in the production of cotton :

Unit	*1950-51*	*1960-61*	*1970-71*	*1971-72*	*1972-73*
Cotton Production (000 bales)	247	669	819	920	960
Area (000 hectares)	225	447	397	400	400
Yield (Kilograms)	197	270	371	414	...
Aerial Spray :					
Coverage (000 hectares)	...	...	119	183	284
Ground Spray (000 hectares)	...	...	...	284	809

*The major reason of non-achievement of the targets of average yield is non-adoption of recommended practices of cultivation and inputs by the Cane Growers.

†The main causes of decrease in areas under Sugarcane is the cultivation of food crops with higher returns like wheat, maize and rice by the farmers in preference to sugarcane.

A new introduction of cycocyle spray will also be made on large scale for achieving appreciable high level of production.

Besides special programmes for raising productivity of American cotton with the functioning of Intensive Cotton Development Programme in Ferozepur and Bhatinda Districts, an additional area of 40,000 acres under cotton particularly Desi will be covered in central districts of State. Similar facilities excepting aerial spray are provided to the farmers.

At State level the cotton production in arid irrigated regions is supervised by Joint Director of Agriculture Plant Protection. Two Deputy Directors of Agriculture assisted by Assistant Cotton Development Officers and Agricultural Inspectors alongwith supporting staff are well spread in this region.

For remaining part of the State the Cotton Development work is supervised by another Joint Director of Agriculture (Cash Crops) assisted by Deputy Director of Agriculture and other field staff.

Oil Seeds

Like cotton, India is short of Oil Seeds. Package Programme has been started on the Groundnut Development, which is very receptive to application of fertilizers particularly superphosphate. A steady decrease in area under groundnut has been registered since 1967-68 and consequently the production. From the year 1971-72 the groundnut cultivation has been given special consideration. The production in 1972-73 will be raised to the level of 3.70 lakh tonnes by increasing area and yield. Targets for fertilizers consumption have been fixed.

Rabi Oil Seeds—In view of tight position of foreign exchange production of Oil Seeds is required to be stepped up. The introduction of High Yielding Varieties of wheat affected the production of oil seeds as these do not stand high fertility level and also aphied is the limiting factor for economic level of yield. From the year 1971-72 a campaign has been started for the timely control of aphied by covering 40,000 hectares. The growers have been offered free plant protection facilities as an incentive in Ferozepur, Bhatinda and Sangrur Districts. This programme will be extended in an area of 80,000 hectares during 1972-73. The production including other oil seeds has been estimated to the extent of 3.60 lakh tonnes for 1971-72 and 3.70 lakh tonnes for 1972-73.

This programme is supervised by Joint Director at the Headquarters and Deputy Director of Agriculture (Oil Seeds), Ludhiana at the State level supported by the field staff.

Targets and Achievement are enumerated below :

	1969-70		*1970-71*		*1971-72*		*1972-73*
	Target	*Achievement*	*Target*	*Achievement*	*Target*	*Achievement*	*Target*
1. Production (000 tonnes)	320	233	340	243	360	360	370

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
5. Development of Horticulture	23,32	17,52	40,84	65,48	21,84	87,32

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
1. Horticulture	9,09	12,00	21,09	37,38	14,23	52,01
2. Vegetables	8,11	3,40	11,51	21,47	3,66	25,13
3. Grapes	6,12	2,12	8,24	6,23	3,95	10,18
Total	23.32	17,52	40,84	65,48	21.84	87,32

Horticulture

The arid irrigated and sub-mountaneous regions of the Punjab State are very potential for the development of Horticulture. With better realization of the importance of fruits in balanced diet, the development of Horticulture is very essential, which produces more tonnage also per unit of area.

For the deveopment of horticulture, the State Government have spread a chain of Government gardens and nurseries to serve as Demonstration-cum-Progeny Orchards. Reliable plant material is raised and supplied to the growers at reasonable rates.

The State Government have given enhanced supply of canal irrigated water to the progressive growers. Abohar was once known as California of India in Citrus fruit production but for the last one decade citrus decline has been witnessed. The State Government have framed a scheme for the rehabilitation of citrus Industry in collaboration with United Nations Development Programme, which is in process.

Vegetables

The new standard of Agricultural production in 4th Plan consists of growing maximum number of crops per unit area/time besides maximising productivity. Vegetables including potato fits in multiple cropping programme which give high tonnage and income as well. The State Government besides offering technical know-how, supply

reliable and disease-free seeds to the farmers at reasonable rates. The vegetable Potato Seed Farm located at Mattewara (851 Acres), Dhogri (58½ Acres), Kartarpur (50 Acres), and Beas (36 Acres) serve as Demonstration-cum-Seed Production Centres.

Advisory service is offered to the growers for maximising vegetable potato production.

In additon to vegetable seed foundation wheat seed is multiplied.

Grapes

Diversification of farming is very essential in view of advanced technology. Grape cultivation gives the highest tonnage and return as compared to any other crop. Grape cultivation scheme was introduced in the Punjab State during 1961-62. Besides advisory service, the Department have established two nurseries for the supply of disease-free and pedigreed plant material to the cultivators.

The State Government also advanced loan @ Rs. 3000 per acre for setting up grape orchard and construction of bower. The limit of loan from Rs. 3000 has been raised to Rs. 10,000 in view of rise in cost.

It is proposed to establish as new Demonstration-cum-Progeny Centre at Mohali, for which land will be got from Urban Development Department.

The Deputy Director of Horticulture (Grapes) is the Controlling Officer and the Horticultural Development Officers one each are stationed at Chandigarh and Jullundur. One Horticultural Inspector along with two beldars are proposed at each district for advisory work.

At present about 400 hectares of area is under grapes. It is proposed to cover 40 hectares in 1971-72 and 60 hectares in 1972-73 under Grape Plantation. Loan for Rs. 5 lakh will be advanced to cultivators for the establishment of vine yards.

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
G. Plant Protection and Pest Control	29,74	76,85	1,06,59	45,25	1,28,98	1,74,23

Plant protection has now been accepted as one of the major factors in increasing Agricultural Production along with better seeds, fertilizers and irrigation. Rapid introduction of High Yielding Varieties changes in cropping pattern and adoption of multiple cropping programme, have aroused the necessity of Plant Protection. With liberal use of fertilizers, multiple and relay cropping etc., insects pests, diseases and weeds tend to spread quickly. The State Government have, therefore, strengthened the Plant Protection Services.

The following three major schemes are under execution :

	Revised Estimates 1971-72	*Budget Estimates 1972-73*
(*i*) Intensification of Plant Protection Work	7,49	8,25
(*ii*) Mass Spraying of Crops	22,12	22,00
(*iii*) Centrally Sponsored Schemes to enable the farmers in eradication of pests and diseases of crops in endemic areas	13	14,00

Under the first two schemes, adequate staff and funds for the purchase of pesticides have been provided. Fifty-one squads have been spread over the State to render custom services. Under the third scheme aerial spray is undertaken in endemic areas. With all the collective programmes under Plan and Non-Plan scheme an area of 32 lakh hectare in 1971-72 and 34 lakh hectare in 1972-73 will be covered.

The entire plant protection work is supervised by Deputy Director of Agriculture (Locust Control Plant Protection) at the State level, who works under the effective control of Joint Director of Agriculture (Plant Protection) under Intensive Cotton District Programme. The work at the district level is executed by Assistant Plant Protection Officers/Subject Matter Specialists (Plant Protection) with the assistance of Plant Protection Inspectors and allied staff.

(Figures in thousands)

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
7. Agricultural Implements and Machinery	14	4,17	4,31	3,05,20	6,70	3,11,90

High Cropping Intensities over large areas are not practical proposals with the bullocks and outdated inefficient tools. Tractors and good farm machinery are a must for second phase of the country Agricultural Production through Intensive Cropping. The latest agricultural machinery will be popularized and arrangements are being made for importing 4000 tractors under World Bank Loan Programme during 1972-73.

The State Government advance subsidy in Inter-National Border area on improved implements. This section is supervised by Agricultural Engineer (Implements) assisted with Assistant Agricultural Engineer (Implements) stationed at Gurdaspur and Ludhiana. Field staff equipped with latest technique and equipment is posted in each district for demonstration work.

The targets and achievements are summarised on page 83.

	1967-68		*1968-69*		*1969-70*		*1970-71*		*1971-72*		*1972-73*	
	Target	*Achievement*	*Target*	*Achievement*	*Target*	*Achievement*	*Target*	*Achievement*	*Target*	*Achievement*	*Target*	*Achievement*
Demonstration of Agricultural Implements	23,00	19,42	16,00	19,00	24,00	24,00	24,00	23,72	24,00	16,49	24,00	...
Popularization of Implements :							April		Dec. 1971			
1. Disc Harrows												
(*i*) Bullocks	...	40,00	...	30,00	...	50,00	...	30,00	...	...	...	...
(*ii*) Tractors	...	20,00	...	30,00	...	10,00	...	40,00	Data not compiled			
2. Seed Drills												
(*i*) Bullocks	...	10,00	...	80,00	...	30,00	...	20,00		Ditto		
(*ii*) Tractors	...	...	...	8,00	...	15,00	...	7,50		Ditto		
3. Thrashers	...	1,60,00	...	1,60,00	...	1,60,00	...	1,60,00		Ditto		
4. Hand Wheel hoe	...	6,00	...	7,00	...	8,00	...	2,00		Ditto		
5. Reapers												
(*i*) Tractors	...	...	...	20	...	50	...	50		Ditto		
(*ii*) Bullocks	...	...	...	20	...	Nil	...	...		Ditto		
6. Maize Mealer	...	20,00	...	30,00	...	No data	...	No data		Ditto		

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
8. Fertilisers and Manures	3,54	4,42	7,96	6,61	4,49	11,10

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
Demonstration of fertilizers, Soil Conditioner, etc.	60	1,32	1,92	2,84	1,29	4,13
Preparation and Distribution of town compost	2,03	3,10	5,13	2,03	3,20	5,21
Soil Testing Laboratory	91	...	91	1,74	...	1,74
Total	3,54	4,42	7,96	6,61	4,49	11,10

Fertilizers

Fertilizers are the key inputs in raising agricultural productivity. This is the most quick and effective source of raising production. The work of supply and distribution of fertilizers to the cultivators in the State is carried out through the Supply and Marketing Federation. Skeleton staff has been provided for reconciliation of the account of the scheme 'Purchase and Distribution of Fertilizers' upto 31st March, 1967. One Chief Fertilizer Inspector alongwith skeleton supporting staff, is provided for the enforcement of Fertilizers Control Orders.

Fertilizers distribution programme is on the increase as indicated below :

(*Tonnes in thousand*)

	1969-70		1970-71		1971-72		1972-73	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
(*i*) Nitrogenous 20% ...	7,34	...	8,74	...	11,00	..	12,50	...
(*ii*) Phosphatic 16% ...	1,31	...	1,96	...	3,60	...	5,00	...
(*iii*) Potassic 60% ...	11	...	12	...	44	...	70	...

Fertilizers programme provides the technical know-how about the right kind, right amount and the right time for its application. The judicious use of fertilizers has created many problems about its economic use. Certain deficiencies of micro-nutrients

have been observed. This scheme will demonstrate the economic and proper use of various fertilizers.

Rural Compost

The object of the scheme is to increase the quantity of cowdung manure and improve its quality by means of new scientific methods. The scheme is carried on in 64 blocks.

Town Compost

The refuse waste in the towns is a potential source of supply of good quality compost which is used for crop production. Financial assistance to the tune of Rs. 2 lakh shall be given to ten municipalites in the Districts for the purchase of tractor/trolly trucks for carrying on urban compost work in the State.

Tragets and achievements are given below :

(*Tonnes in thousands*)

	1970-71		1971-72		1972-73
	Target	Achievement	Target	Achievement	Target
Rural Compost ...	61,00	67,39	63,00	Data not yet compiled	64,00
Urban Compost ...	2,60	2,07	2,60		2,65

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
9. Agricultural Information Service—Farmers Education and Training	6.31	6	6.37	14.08	25	14.33

The break-up of expenditure under this programme is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
Agricultural Information Service	96	...	96	3,68	...	3,68
Farmers Training	4,52	6	4.58	8,09	25	8,34
Education	83	...	83	2,31	...	2,31
Total	6.31	6	6.37	14.08	25	14.33

The main object of the Agricultural Information Wing of the Department is to furnish to the farmers the latest information regarding improved methods of scientific farming through various audio-visual media and also by publishing simple leaflets/pamphlets/folders in different languages, *viz.*, English, Punjabi and Hindi on various crops. Wide publicity is given to the various projects launched by the department to achieve the targets of increased agricultural production. Publicity meetings are arranged at District, Block and Village levels. Training camps are organised twice a year before the beginning of Rabi and Kharif Seasons to equip the farmers with the latest techniques and scientific knowledge for maximising the agricultural production. Exhibitions and fairs are organised in the blocks. Cinema shows are also arranged in the Blocks by using projecting equipment and by conducting programme of State Information Unit and Public Relations Vans. Field trips are organised to National Development plots and other demonstration plots.

Basic data about the agricultural situation in the districts is collected. The up-to-date figures regarding use of land, irrigation, area under crops sown, change in cropping pattern and agricultural data are also collected. The farm news and information regarding departmental activities and programmes are collected and passed on to the State Information Unit for use in the Press and for Radio.

There are 7 Farmers Training Centres located at Amritsar, Jullundur, Gurdaspur, Ludhiana, Ferozepur, Sangrur and Patiala. Necessary arrangements have been made at these centres for demonstration and education in the latest technique and know-how. The growers assemble off and on for discussion on various problems amongst themselves and with the experts of Agriculture Department and Punjab Agricultural University.

(*Figures in thousands*)

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
10. Agricultural Marketing and Warehousing	7,27	2,02	9,29	31,90	2,36	34,26

The break-up under this activity is given below :

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
Marketing Intelligence Programme	...	2,02	2,02	4,13	2,36	6,49
Grading and Packing Centres	1,39	...	1,39	2,62	...	2,62
Grading of foodgrains and Oil Seeds	88	...	88	1,15	...	1,15
Warehousing Corporation	5,00	...	5,00	24,00	...	24,00
Total	7.27	2,02	9,29	31.90	2.36	34,26

Marketing is an important aspect of Agriculture. Market surveys are conducted to help the farmer to produce the variety which will give him maximum return. A bureau of market intelligence has to be built up regarding prices, demands, availability etc., so that it helps both the producer and the trader. With this objective a marketing wing is functioning under Director of Marketing assisted by Joint Director Marketing and two Assistant Marketing Officers. The main function of the marketing section is to help the agriculturists to standardize and regulate the marketing charges to establish regulated markets, to find out more markets and to fix standards of quality.

Market Intelligence Programme

This programme is carried out at 13 centres *viz.*, Jullundur, Amritsar, Moga, Abohar, Bhatinda, Patiala, Khanna, Jagraon, Batala, Ludhiana, Kotkapura, Barnala and Chandigarh. The data such as prices, arrivals, despatches etc., of more than 20 commodities depending upon the season is collected and a daily price bulletin is sent to All India Radio, Jullundur for broadcast in the Rural Programme. Weekly price trends for important commodities such as wheat, gram, sarson and potato are prepared in local language and broadcast through the All India Radio on every Sunday.

The information on weekly and monthly wholesale prices, arrivals etc., is collected and published in weekly and monthly bulletins and circulated to various agencies and even outside the State to enlighten the producers, consumers and traders.

Grading and Packing Centres

Six Agmark Centres are established at Ludhiana, Jullundur, Amritsar, Moga, Abohar and Patiala. One Agmark laboratory has been established at Moga for extending analysis facilities for the products requiring chemical tests. Two more laboratories will be established soon at Amritsar and Ludhiana.

The targets of the scheme for the year 1971-72 and achievements upto December, 1971 and targets for 1972-73 are given in the table below :

Serial No.	*Name of the Commodity*	*1971-72*		*1972-73*
		Targets	*Achievement up to 31-12-71*	*Target*
1.	Eggs (in Nos.)	20,00,000	18,79,000	20,00,000
2.	Grapes (in Kilogram)	2,000	3,370	2,500
3.	Malta (in Nos.)	4,00,000	40,000	2,00,000
4.	Vegetable Oil (in quintals)	10,000	20,290	20,000
5.	Cotton (in bales)	2,000	1,156	2,000
6.	Table Potatoes (in quintals)	1,000	160	1,000
7.	Spices (in Kilogram)	500	1,445	2,000
8.	Honey (in Kilogram)	2,000	3,066	2,000

Warehousing Corporation

A sum of Rs. 5 lakh over 24 lakh has been provided for financing the Warehousing Corporation to enable the Corporation to maintain storing capacity to meet the needs of the State.

(*Figures in thousands*)

	Revised Estimates, 1971-72			Budget Estimates, 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
11. Agricultural Statistics	4,28	2,13	6,41	4,75	2,23	6,98

In view of the planned programmes launched in the country to tone up the pace of development for raising the living standards of masses, reliable estimates of the production of crops are a vital necessity. The statistics indicate the relationship between input and output and are indispensable in framing internal and external policies. They are also useful to the growers, consumers and traders and gradually help in regulating prices.

The following items of work are executed under this programme.

Crop Estimates Survey

For estimating the average yield and total production of major crops, *i.e.*, Wheat, Barley, Rice, Maize, Bajra, Gram, Cotton, Sugarcane, Groundnut and Rabi Oil Seeds, crop cutting experiments are planned and got conducted by the Agriculture Inspector of Agriculture Department and Girdawar, Kanungo of the Revenue Department. The results available from these experiments are used for estiamting the total production at the district level and the State as a whole.

Crop cutting experiments are also planned in the development and package areas of sugarcane and groundnut.

Index Numbers and Growth Rates

Indices of area production, productivity of crops and net area sown, cropping pattern, cropping intensity are also prepared. The growth rate of production area and productivity of Major Crops both linear and compound are also worked out.

Sample Surveys and Forecast Reports

The survey is also conducted for estimating the marketable surplus of important commodities. Forecast report of about 21 crops are issued.

The targets and achievements regarding experiments on crop estimation surveys are given below :

Crop	Unit Number	1970-71 Target	1970-71 Achievement	1971-72 Target	1971-72 Achievement	1972-73 Target
1. Paddy	Each	5,60	4,53	5,60	Data not yet compiled	5,60
2. Maize	Do	6,30	3,95	7,00	Ditto	7,00
3. Bajra	Each	2,40	1,61	2,40	Ditto	2,40
4. Cotton	Do	3.70	0,72	4,00	Ditto	4,00
5. Groundnut	Do	2,00	1,66	2,40	Ditto	2,40
6. Sugarcane	Do	4,00	3,12	4,00	Ditto	4,00
7. Wheat	Do	8,00	6,71	8,00	Ditto	8,00
8. Gram	Do	3,64	1,78	4,00	Ditto	4,00
9. Barley	Do	2,00	1,36	2,00	Ditto	2,00
10. Rabi Oil Seeds	Do	2,00	...	2,00	Ditto	2,00

The information regarding the movement of food commodities and other agricultural commodities is collected monthly from 86 foodgrain-markets of the State and is supplied to the Ministry of Food and Agriculture, Government of India, Food Corporation of India and the Director of Food and Supplies, Punjab for information and policy programme.

(*Figures in thousands*)

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
12. Research and Education	72,33	1,50,14	2,22,47	72,45	1,50,14	2,22,59

The Research and Education programme is conducted by the Punjab Agricultural University, Ludhiana and the Khalsa College, Amritsar. The break-up of expenditure incurred by these institutions is given below :

	Revised Estimates 1971-72			Budget Estimates 1972-73		
	Plan	Non-Plan	Total	Plan	Non-Plan	Total
Punjab Agricultural University, Ludhiana	71,26	1,50,00	2,21,26	71,26	1,50,00	2,21,26
Khalsa College, Amritsar	1,07	14	1,21	1,19	14	1,33
Total	73,33	1,50,14	2,22,47	72,45	1,50,14	2,22,59

An Agricultural University has been established at Ludhiana since 1962, where facilities for degree and post-graduate studies are available in various subjects of Agriculture. Besides, the University, the Khalsa College, Amritsar, also provides courses in Agriculture at graduate level. These institutions are given grant by the Government for research and running of agricultural courses. Organizations like Farmers Forum, Young Farmers Association are also provided grants for educating the farmers in rural areas.

(*Figures in thousands*)

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
13. Minor Irrigation	67,78	3,34	71,12	2,28,17	7,94	2,36,11

The break-up of expenditure under this programme is given :

	Revised Estimates 1971-72			*Budget Estimates 1972-73*		
	Plan	*Non-Plan*	*Total*	*Plan*	*Non-Plan*	*Total*
Purchase of debentures State Land Mortgage Bank against special Agricultural Refinance Corporation Scheme	50,00	...	50,00	74,00	...	74,00
Purchase of debentures normal loaning programme of Land Mortgage Bank	...	...	...	1,17,00	...	1,17,00
Subsidy for tubewells pumping sets and percolation wells	2,00	...	2,00	3,00	...	3,00
Other Ground water schemes	15,78	3,34	19,12	34,17	7,94	42,11
Total	67,78	3,34	71,12	2,28,17	7,94	2,36,11

At the time of re-organisation of the Punjab on lst November, 1966 the extent of major irrigation was 12.77 lakh hectares and minor irrigation by way of dug-wells, pumping sets and Tubewells was 9.93 lakh hectares. The percentage of irrigation in the State on the net area basis was only 60 per cent. Since then no major improvement could be made in surface Irrigation and the only way left for increasing the agricultural production was to develop assured irrigation from ground water potential. A

quick survey was made for the annual recharge to the ground water potential and it was estimated that 3 lakh more tubewells could be installed. With the implementation of Minor Irrigation Schemes in the State, the area under minor irrigation was increased as per table below :

(*Hectares in thousands*)

	1969-70	*1970-71*	*1971-72*	*19727-3*
Net area under Minor Irrigation	14,65	15,86	17,07	18,32

Debentures—For the installation of tubewells credit facilities are extended through the Land Mortgage Bank, Cooperative Banks, Commercial Bank and the Agricultural Refinance Corporation and Small Farmers Development Agency in districts of Ferozepur, Amritsar, Sangrur and Patiala. A sum of Rs. 117 lakhs is proposed to be spent during 1972-73 for the purchase of debentures of Land Mortgage Bank under their normal loaning programme and Rs. 74 lakhs under Agricultural Refinance Corporation Programme. At the beginning of the 4th Five Year Plan there were 1 lakh tubewells in the State. The achievement in the installation tubewells from all sources is given below :

1969-70	*1970-71*	*1971-72 Anticipated Achievement*	*1972-73 Target*
5,22,80	40,000	40,000	40,000

Ground Water Schemes — On the basis of findings and *ad hoc* surveys conducted by the Agriculture Department 3 ground water zones have been demarcated as detailed below :

Saline Zone	...	South-Western part of State
Alluvial Plains	...	Central Zone comprising of the districts of Jullundur, Amritsar, Ludhiana, Kapurthala and parts of Patiala, Sangrur and Gurdaspur Districts.
Mountaneous and sub-mountaneous Zone	...	North-eastern part of the State.

On account of uncertain ground water conditions in Saline Zone and areas of Alluvial Plains it is not possible to sink the tubewells. Trial Bores are, therefore, sunk to find out availability and suitability of ground water. Pump tests are conducted on successful Trial Bores when converted into tubewells.

The work of sinking tubewells for the cultivators is undertaken on a fixed schedule of rates. Exploratory bores are sunk in those parts of the State where

tubewell irrigation is still not popular. The sites are selected in the lands of individual cultivators, Panchayats and the Cooperative Societies of farmers. If a trial bore proves successful, the half of the total expenditure is recovered in cash before the conversion of the bore into a tubewell and the balance after one year. In case the trial bore proves unsuccessful the entire expenditure is borne by the Government. The progress made is given below :

(*In thousands*)

Activity		*1970-71*		*1971-72*		*1972-73*	
	Unit	*Target*	*Achi-evement*	*Target*	*Achi-evement*	*Target*
1. Sinking of custom bores	... (Number)	3,25	3,40	3,25	3,25	3,25
				(to be achieved up to 6/72)		
2. Sinking of trial bores	... (Number)	12	14	30	12	45
3. Development of tubewells	... (Number)	1,50	1,76	1,50	1,50	1,50
				(To be achieved up to 6/72)		

NOTE — In due course, more meaningful data should be given in the tables to relate expenditure to work done.

6

Informational and Control Aspects

A well designed and meaningful information and reporting system is essential for managerial control. This is an important pre-requisite for performance budgeting which requires to be continually sustained through a feed-back machinery. In the absence of required data at the proper time, analysis and decision-making at every stage will be seriously handicapped affecting the utility of performance budgets as a tool for management.

Three basic elements could be identified in the technique of performance budgeting. They are—structural, analytical and informational. Though each of these elements is important by itself, the informational aspect is crucial, as adequate information appropriate to each level is essential to support the structural and analytical aspects of performance budgeting. Information is vital for budget formulation, implementation, control and appraisal. It is also required for integrating time-cost-work schedules and for effecting the required amount of coordination among the organisations in charge of programmes and schemes.

DEFECTS IN THE EXISTING SYSTEM

A study of the reporting system in a number of departments and organisations, at the Centre as well as the States, has revealed that information system is one of the weakest links in the chain of programme management. At present reporting involves avoidable paper work all around. There is multiplicity of reports. A mass of details are sent up, through innumerable reports, to higher levels where no worthwhile action is ever taken or is possible. This is because most of the information is of no relevance to them. The reports have only historical value. They do not bring out the action that is required or how things are going to shape in the future. The control aspect is generally lost sight of. There are often complaints from lower levels in the hierarchy that a sizable part of their time is taken away by endless reports. What is worse is that lower levels are called upon to furnish information on matters which are already in the knowledge of the higher levels. Unnecessary particulars are repeated in every report. There are cases where, the

lower levels are asked to send 'nil' reports, even though the information called for is not applicable to them. Above all, the reports generally bring out the financial progress under the usual budgetary heads and no co-relation is made with the physical progress in most cases, except in respect of major projects and programmes under the Plan.

It is obvious that management action is not possible on the basis of such reports. Review, control and appraisal should be an in-built feature to be done in regular intervals. This is the crux of management and also performance budgeting as a management tool. Much could be done internally by an organisation to improve their reporting system to suit their needs and resources.

INFORMATION NEEDS—ELEMENTS IN THE SYSTEM

An information and reporting system is primarily designed to facilitate analysis of the progress of schemes and programmes against approved time and cost schedules. Information requirements are, however, different in different stages. The information cycle can be divided into four broad stages—objectives and policy formulation, detailed plan and budget formulation, implementation and control. As these stages are different in nature, the specific requirements of information for each stage are also different. This has to be kept in view in devising the system.

In any system of information reporting, there are five basic elements, each of which needs to be attended to and strengthened, if the management were to get the full advantage of a good information system. They are—inputs, processing and analysis, storage, retrieval and output. There are various methods and techniques in the processing and analysis of incoming information, its proper storage, subsequent retrieval and its passage to the higher levels. To begin with, simple and effective manual methods could be adopted. Depending on the size of the problems, the nature of the organisation and the resources position, refined mechanical and electronic devices could be introduced wherever necessary or feasible. It will be an advantage to set up Information Units or Data Centres at each level to do this important job.

IMPORTANT CHARACTERISTICS

An information system for an organisation has to be designed having regard to the nature and complexities of the activities involved and the coordination needed. It should, however, be as simple and effective as possible. Information that is generated and passed on to higher levels should be quantitatively just adequate and qualitatively relevant. As the level goes up, quantity should be less whereas quality should improve. Enough literature on the requirements and characteristics of a proper information and reporting system is available in the country. Any good book could be referred to for a detailed discussion on the subject.

Broadly speaking, the following are some of the important points to be kept in view in developing a sound information and reporting system :

(*i*) Timeliness and accuracy should be ensured. These two are somewhat opposing in nature, but an optimum balance should be struck so as not to sacrifice one at the expense of the other ;

(*ii*) Information system should correspond to the needs of the organisational set up in each department. In other words, the system should be tailor-made for each organisation;

(*iii*) Reporting should be such that decisions are possible on it and that there is a two-directional flow of information. Lower levels of management can take decisions on issues only to the extent of their powers. Beyond this, decisions of higher officers are required. For this, reports should be so designed as to draw their pointed attention to these areas and to get a feedback from them regarding their decisions so that corrective action could be initiated in time to set right cost overruns, slippages, etc. It is often seen that information flows from bottom to top, but decisions from the top are either not communicated or they are delayed;

(*iv*) Reporting to higher levels should be based on the concept of 'management by exception'. Under this approach, only criticalities are highlighted for action by higher management. Reports are made only in respect of items which do not progress according to schedule;

(*v*) The reports should not only reveal past happenings but also be predictive and forward looking in nature. The reports should highlight problems, present as well as anticipated, so that attention of those concerned is 'alerted' and corrective action called for;

(*vi*) There snould be uniformity and consistency and all terms should be well-defined and understood;

(*vii*) A system of reporting needs an independent data base to process and supply the information in a meaningful manner; and

(*viii*) In the case of projects and works, where, 'net-work' technique (PERT/CPM) is in operation, reports developed should be part of the 'network'—based management control system. Such management information reports facilitate periodical review and appraisal and prompt action, in regard to critical activities.

ACTION REQUIRED

In the context of Performance Budgeting, each organisation should give a thorough look into the existing reports, their frequencies and the adequacy of the data that is generated. For this purpose, a group of officials including Finance/Accounts Officers, should meet as often as necessary and lay down the specific requirements of management at each level. Different formats for reporting should also be evolved and prescribed after due consideration, having regard to the functions and powers at each level. Data centres should be created in each organisation where information should be received, analysed, stored and made available to the appropriate persons whenever required. No report to any level should contain more than the required information. The reports should bring out, in regular intervals, the financial and physical progress of each programme/activity/scheme. Their periodicity could be determined only by the organisation. Information should be gathered along the activity classification followed in the performance budgets. For purposes of appropriation and fund control, reports should also bring out the progress of the expenditure against allotted amounts under each unit of appropriation. In all these reports, it may be emphasised, the extent of details should be with reference to the level

concerned. In Annexure to this Chapter, simple formats of reporting for use in Government Departments has been attempted. These need to be elaborated or adapted to suit individual conditions. No reporting format can be prescribed for general application. The formats have to be evolved and designed for each individual organisation internally.

In the matter of presentation of the reports also, no uniform principles can be laid down. To start with, the reports could be in the usual tabular form supported by explanatory statements. Refinements could be thought of by and by as experience is gained. Graphs and charts could be used for greater effect in due course. The attempt should be to make the reports shorter and to the point so that attention is focussed on important and critical aspects. If the reports are lengthy statements, this objective will not be achieved. It is entirely up to the organisation to take steps in this regard.

Prompt follow up action on the basis of the review and appraisal to be made periodically is an essential feature of performance budgeting. To the extent this is not possible now owing to inadequacies of data or indifferent reporting, the utility of performance budgeting as an operational tool to management will be greatly reduced. In the case of major projects and works, planning, scheduling and implementation will be greatly facilitated by the application of network techniques (PERT/CPM). When the network technique is in operation, the progress reports are specially designed to bring out the critical activities.*

*For a network oriented reporting system, please see page 20 and Annexure IV at pages 54-60 of "Application of Performance Budgeting in the Central Public Works Department", Indian Institute of Public Administration, March 1972. See also the Bibliography given at the end for reference books on PERT/CPM.

ANNEXURE

PROGRESS REPORTING FORMATS—FOR GENERAL USE IN GOVERNMENT

A. FINANCIAL REPORT

A—BY PROGRAMMES AND ACTIVITIES

Ministry — Programme/Activity — Report Period—Quarter ending

Office — Report Date—

Sl. No.	Activity	For the Quarter			To the End of Quarter			For the Year			Reference to Narrative Report
		Budget Rs.	Actual Rs.	Variance Rs. %	Budget Rs.	Actual Rs.	Variance Rs. %	Budget Rs.	Anticipated Rs.	Anticipated variance Rs. %	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.														
2.														
3.														
4.														
5.														
6.														

B—BY OBJECTS OF EXPENDITURE

Ministry | Programme/Activity | Report Period—Quarter ending

Office | Report Date—

Sl. No.	Objects of Expenditure	For the Quarter				To the End of Quarter				For the Year				Reference to Narrative Report
		Budget Rs.	Actual Rs.	Variance Rs.	Variance %	Budget Rs.	Actual Rs.	Variance Rs.	Variance %	Budget Rs.	Anticipated Rs.	Anticipated Variance Rs.	Anticipated Variance %	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1,	Salaries													
2.	Wages													
3.	Travel Expenses													
4.	Office Expenses													
5.	Materials and Supplies													
6.	Grants-in-aid, etc.													

B. PHYSICAL REPORT

Ministry | Programme/Activity | Report Period—Quarter ending

Office | Report Date—

Sl. No.	Activity	Unit	For the Quarter				To the End of Quarter				For the Year				Reference to Narrative Report
			Target	Actual	Variance Total	%	Target	Actual	Variance Total	%	Target	Anticipated Actual	Anticipated Variance Total in Units	%	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.															
2.															
3.															
4.															
5.															
6.															

C. FINANCIAL AND PHYSICAL SUMMARY REPORT

Ministry — Programme/Activity — Report Period—Quarter ending

Office — Report Date—

Sl. No.	Activity	Performance to the End of Quarter				Anticipations to End of Year				Reference to Narrative Report
		Financial		Physical		Financial		Physical		
		Variance (+) or (—)		Variance (+) or (—)		Overrun (+) Shortfall (—)		Excess (+) Shortfall (—)		
		Rs.	%	Unit	%	Rs.	%	Units	%	
1	2	3	4	5	6	7	8	9	10	11
1.										
2.										
3.										
4.										
5.										

D. NARRATIVE REPORT

Ministry — Programme/Activity — Report Period—Quarter ending

Report Date—

Ref. to Report—

Highlights : Important Aspects

Variances :
- Reasons for Major Variances
- Current or Potential Problems
- Impact of Problems on :
  - Immediate Performance
  - Long-Term Impact on Total Programme/Activity

Corrective Action
- Corrective Action Underway
- Recommendations for Further Action at High Levels

Outlook
- Outlook for Accomplishing Major Targets and Comparison with Preceding Outlook

7

Performance Budgets for Capital Projects

In the preceding chapters, some aspects in the preparation of performance, budgets of operating departments were discussed and illustrated. They dealt with the evolving of a programme and activity classification, their costs, appropriate accounting structure and the development of workload factors in order to evaluate actual performance in relation to objectives set and targets laid down. They did not specifically cover the requirements of capital projects. In this chapter the discussion will be devoted to a consideration of the special features in the preparation and use of performance budgets of capital projects. The capital projects, which have a gestation period, are different from a current programme or activity, which usually runs for a year or so and which are mainly financed out of revenue budgets. Though the main objective of a performance budget, whether for an operating department or for a capital project, is by and large, the same, *viz.*, relating expenditure provision or outlay to services to be rendered or work proposed, there are certain important issues that require to be kept in view in considering performance budgets for capital projects. The emphasis, scope and the nature of details to be covered in the performance budgets of capital projects are somewhat different from those of operating departments.

LOANS, GRANTS AND INVESTMENTS

In addition to the direct outlay incurred on various capital projects like irrigation, power, buildings and other public works, a sizable portion in the capital budget is by way of loans, grants and investments. Bulk provisions are made towards loans and grants to various State Governments, Union Territories, private organisations, etc. Similarly, loans are advanced to public sector undertakings and money invested in their share capital. There are obvious limitations, in attempting a performance analysis of such transactions in the performance budget of Government, as the actual performance will not be available at the giving end except to the extent obligations have been laid down in the terms and conditions. Therefore, though suitable write-up could be given about the purposes and objectives for which money has been advanced or invested, it is not always possible to have a performance

analysis of such transactions. In such cases, loans and grants or investments are to be kept as separate entities in the activity classification and suitably explained as best as possible. Where, however, the objective or purpose of a loan or grant is known, it should be shown as a distinct item under the relevant programme or activity representing that purpose and treated distinctly from other direct expenditure. Depending on availability of data, their performance could also be brought out.

In the case of loans to and investments in public sector undertakings, though a suitable write-up could be added about the purpose for which they are given together with a general picture of their working results, it is obvious that a comprehensive performance budget of these undertakings cannot be incorporated in the performance budget of the Government. Apart from the specific conditions attached, the requirements of the relevant statute setting up the undertaking or the provisions of the Companies Act will have to be taken into account. Moreover, broad questions of autonomy of the undertakings will also come up, if their overall performance budgets are to be incorporated in government budget for presentation to the Parliament/State Legislatures. At least, their capital requirements could be presented with a performance analysis as, even today, these are required to be submitted to Government whenever they come up for loans or additional share capital. Their revenue and other budgets are not required to be submitted. A performance budget of an undertaking is a comprehensive one including not only capital but also revenue, cash, materials, overhead and other budgets. While such a comprehensive performance budget is no doubt desirable for these public undertakings, they have to be, of necessity, internal documents for management use. All that can be done by way of pertinent information about the performance of public sector undertakings is to improve upon the 'programme-cum-performance statements' that are at present added in the Notes on Important Schemes supplemented to the general budget and to incorporate them in the performance budgets of the concerned ministry/department while explaining the loans and investments. This is different and distinct from a comprehensive performance budget to be prepared internally for management use.

The various budgets that are currently being prepared in the public sector undertakings, their use and limitations, the need for an integrated and comprehensive budget within the framework of a management accounting system and the connected issues are proposed to be dealt with in detail in a separate volume. Therefore, a discussion on performance budgets of capital projects in this chapter is confined only to the direct outlay on various construction and other asset building activities.

PROJECT MANAGEMENT

The performance approach to budgeting of a capital project assumes that the project has been selected after a careful analysis of the cost-benefit aspects and the application of other related investment criteria. Issues such as what project to construct, where to construct, when to construct, how to construct, how much to construct in a given period, etc. are very relevant before going ahead with a project. After a decision has been taken on these issues, a project needs to be implemented and controlled within a pre-determined time and cost schedule. The management planning and control system for a project should embrace feasibility reports, detailed project reports, detailed estimates, proper financial and work plans, assessment of immediate and future needs in terms of men, material and other resources and review and appraisal of work in progress on the basis of a performance budget supported by meaningful and timely reports on performance.

Management today has a number of planning and analytical tools to aid them in project formulation and implementation. Particular mention may be made here of project planning and scheduling techniques such as PERT* and CPM* which go by the name 'Network Techniques'. These enable a rational and scientific way of planning and controlling any project. Network analysis gives a graphic representation of a project plan by a schematic diagram or network that depicts the various component parts and activities of the projects arranged systematically in a logical sequence of their occurrence, showing clearly their inter-dependencies and relationships. Network technique helps management to identify well in advance the critical or problems areas and to take timely corrective action. A network with the time factor added to it gives the precise work plan for action. The PERT based reporting system enables a watch over the progress for control.*

BUDGET IN RELATION TO FINANCIAL AND WORK PLAN

Before a performance budget for a project is attempted, it is, therefore, necessary to have a good management system integrating planning, programming, budgeting and reporting. For every project, a detailed project report should have been prepared after having gone into the economic and technical feasibilities, cost-benefit analysis, etc. When this is done, the detailed estimates should be analysed and a work-breakdown structure evolved. This would constitute the activity classification for the project. The networks would represent the work plan for the project as a whole by major milestones as also by individual activities or sub-activities. From these networks, the quantum of work to be done in each year or any given period will be known. When the resources required to complete a given job in a given period are computed, one can have a time and cost schedule which could be depicted to a time scale in the form of a bar chart. The bar chart will show the schedule of expenditure over the period of construction and for each year (or any shorter period, if desired.) This will form the basis of budget provisions for the project.

CONTROL SCHEDULE

In respect of all projects under construction, it is necessary to have a Control Schedule indicating the major activities or milestones in the project, total sanctioned cost, cost anticipated, date of commencement of each activity, target date for completion, expenditure incurred so far against what was planned, corresponding physical progress against what was planned, expenditure proposed during the budget year, physical progress anticipated in the budget year, delays in completion, variances in expenditure and physical achievements, reasons for delays and variance, projected date for completion, future financial commitments, etc. Such control schedules should be prepared as part of the performance budget of every major project, to start with, if not for all. These control schedules are the key stones of the performance budgeting system for a capital project. It is, however, very important to evolve a good reporting system on the basis of these schedules so that implementation is controlled at higher levels. Without reporting to aid review and appraisal, a performance budget by itself will be of no significant use to management. The format of such a control schedule in respect of some Public Health Works is illustrated at the end of this chapter.

*Programme Evaluation and Review Technique and Critical Path Method. Useful books on the subject are given in the Bibliography at the end.

ILLUSTRATION

CONTROL SCHEDULE ANITATION SCHEMES (PWD—PUBLIC HEALTH)

Serial No.	Name of Work	get physical gress to end 1971-72 nal	Revised	Actual physical progress likely to end of 1971-72	Reasons of variation	Budget provision for 1972-73	Target physical progress to end of 1972-73	Remarks
(1)	(2)	2)	(13)	(14)	(15)	(16)	(17)	(18)
1	Providing Water Supply and Sewerage Scheme in Industrial Estate (Focal Points) at Rajpura 1st Phase	00% 00% 00% 00% 90% 00% 80%	100% 100% 100% 100% 90% 100% 80%	100% 100% 100% 100% 90% 100% 80%	The scope of work has increased and as such there is likely delay of 3 months in completion of works	1,00,000	100%	
2	Providing Public Health Services Focal Point Dhandari Kalan 1st Phase	00% 00% 00% 00% 60% 75%	100% 100% 100% 100% 60% 75%	100% 100% 100% 100% 60% 75%	The delay of 5 months in completion of scheme is due to non-availability of bricks	3,00,000	100%	
3	Providing Public Health Services in Focal Point Dhandari Kalan	00% 00% 00% 00% 60% 75%	100% 100% 100% 100% 60% 75%	100% 100% 100% 100% 60% 75%	Ditto	3,00,000	100% 100% 100% 100% 100% 100%	
4	Providing Public Health Services Industrial, Growth Focal Point IIIrd Phase Dhandari Kalan	0% 15% 5% 0%	50% 15% 25% 50%	50% 15% 25% 50%	—	8,00,000	100% 75% 70% 90%	
5	Providing Water Supply and Sewerage Scheme in Industrial Growth Mohali 1st Phase	0%	100%	100%	—	--	—	
6	Providing Water Supply and Sewerage Scheme in Industrial Growth Mohali 2nd Phase	0%	100%	100%	—	—	—	
7	Providing Storm Water Drainage Focal Point at Mohali 1st and 2nd phase	0%	20%	20%	—	8,14,132	100%	

)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
),000	3,00,000	3,00,000	3,00,000	30%	30%	30%	—	5,58,664	100%	
),000	12,30,000	12,30,000	13,80,000	98%	98%	98%	—	1,000	100%	
,000	12,23,000	12,23,000	13,23,000	98%	98%	98%	—	1,000	100%	
),000	13,00,000	13,00,000	13,00,000	70%	70%	70%	—	6,54,048	100%	
),000	5,00,000	5,00,000	5,00,000	15%	15%	15%	—	22,73,900	100%	
,000	3,40,000	3,40,000	9,74,000	(i) 100% (ii) 100% (iii) 100% (iv) 100%	100% 100% 100% 100%	100% 100% 100% 100%	—	—	—	
	,20,000	7,20,000	9,61,000	(i) 100% (ii) 25% (iii) 90% (iv) 60% (v) 90%	100% 25% 90% 60% 90%	100% 25% 90% 60% 90%	Work of providing House connection to various residential plots will be done as soon as the houses are constructed	18,22,000	100% 100% 100% 100% 100%	
000	5,00,000	5,00,000	8,00,000	47%	47%	47%	—	3,50,200	65%	

It may be mentioned in this connection that the type and extent of detail in the performance budget of a project depend on the level for which such a budget is prepared. As the level goes up, the budget would be broader. Therefore, in the summary budget for use of Government or Legislature, the break-up into activities and their write-up, as also the content of the control schedule, would be only in broad terms. The appended illustration is indicative of the broad information for top level control.

An integrated performance budget for a typical capital project is also illustrated in the Annexure to this chapter. The general features therein and the details given could be suitably adapted to a given situation and level.

ANNEXURES

PERFORMANCE BUDGET FOR A CAPITAL PROJECT—AN ILLUSTRATION

A Case Study in respect of a Capital Project whose performance budget was attempted by the training participants in a Course on Performance Budgeting conducted by the Indian Institute of Public Administration at Madras, is enclosed. This involved use of network technique for time and cost phasing.

The Project relates to the Tamil Nadu Housing Board. They are, however, not responsible for the facts and figures assumed or taken for purposes of this study.

The exercise was done in 3 days' time and, therefore, is not complete in all details. It indicates the approach and the use of planning and scheduling technique in budgeting for a project.

NETWORK BASED PERFORMANCE BUDGETING FOR KORATTUR NEIGHBOURHOOD SCHEME—PHASE I

INTRODUCTION

The Korattur Neighbourhood Scheme is one of the important schemes undertaken by the Tamil Nadu Housing Board for easing the housing shortage in the city of Madras. The scheme proper is located near Ambattur Industrial Estate about 13 kms. from the city of Madras (about 3 kms. outside the city limits) along the Madras Thiruvalluvar Road. It is connected with Madras city by frequent bus and train services.

In view of its proximity to the city and in view of its central location with reference to the major industrial activities in Ambattur, the development of this scheme will go a long way in solving the acute shortage of housing problems in the city.

DETAILS OF THE SCHEME

Under this scheme, 59.28 hectares of land have been acquired and developed by giving essential amenities like roads, parks, water supply, drainage, street lights, schools, shopping centres, community hall, etc. It is proposed to develop 1,160 residential plots for the different strata of society like Low Income Group, Middle Income Group and Economically Weaker Sections. Of these, 642 plots are proposed to be sold either on outright sale basis or on hire purchase basis and the remaining 518 plots are reserved for construction of quarters for Low Income Group, Middle Income Group and Economically Weaker Sections of the community as detailed below :

1. Economically Weaker Sections	136 Units
2. Low Income Group	365 ,,
3. Middle Income Group	300 ,,
Total	801

In addition, it is proposed to construct 60 shops and one Community Centre to cater to the needs of the residents in that scheme. The intention is that the scheme should be an ideal and self-contained one in the vicinity of Madras.

FINANCLAL OUTLAY

The total cost of the project is of the order of Rs. 225.60 lakhs as per details below :

	(*Rs. in lakhs*)
Development of Land	76.46
Construction of Residential Buildings	141.14
Construction of Shops and Community Centre	8.00
Total	225.63

The year-wise break-up details, both physical and financial, have been indicated in the performance budget (Annexure I-D).

PROGRAMME OF EXECUTION

The development works were taken up in August 1970 and they are expected to be completed in all respects by the end of 1973-74. The construction works have commenced in 1971-72 and they are also expected to be completed in all respects in about 3 years.

FINANCIAL POSITION

This project is proposed to be executed through loans obtained from the Housing & Urban Development Corporation Limited, New Delhi under the 'Revolving Fund' Scheme. The Housing & Urban Development Corporation will be releasing financial assistance at the beginning of every financial year depending upon the programme of execution for that particular year. The receipts realised by way of outright sale of houses, plots, flats as well as hire purchase instalments thereof will be utilised for the repayment of the amounts of loan together with the interest, at the end of each year in annual instalments depending upon the amount of receipts realised in that year.

TIME SCHEDULE

The whole scheme is proposed to be executed over a period of 4 years which would include land acquisition and development, construction of quarters under different categories and provision of ancilliary facilities.

OBJECTIVE OF WORKSHOP STUDY

Instead of preparing an ad hoc schedule and budget based on such a schedule, it is proposed to apply the Network Technique (PERT/CPM) for evolving realistic schedules and cost estimates in a more rational way, and prepare a performance budget for the entire scheme.

The workshop study, therefore, involves the preparation of the following :

1. Development of a work Breakdown Structure for the entire project;
2. Development of a Master Control Network for the entire project, based on the Work Breakdown;
3. Preparation of a Bar Chart showing the time-cost schedule, based on the Master Control Network;
4. Preparation of a Performance Budget for the scheme based on the Bar Chart;
5. Evolving a Performance Control Schedule.

The above items are discussed below :

Development of Work Breakdown Structure : The entire project has been conveniently divided into three major constituents, *i.e.*, land acquisition, land development and construction. These major constituents were, in-turn, subdivided into their functional components. Care has been taken to include all the items of works forming part of the project so that this Work Breakdown Structure will form the basic document for constructing net-works and for evolving a rational schedule. Such a Work Breakdown Structure developed for the project is at Annexure I-A.

Development of Master Control Network for the Entire Project : Based on the Work Breakdown Structure, a Master Control Network was prepared which included all the major components, etc., as shown in the Work Breakdown Structure. The objectives of developing the Master Network for the entire project were : that it included all the works forming part of this project, without any omission : it showed at a glance all the functional areas of this scheme at one place, it determined the project duration and highlighted the potential problems of the project and provided a basic document for all further planning and control of the project. A Master Control Network so developed for the Scheme is at Annexure I-B.

Bar Chart (Time-Cost Schedule) : All the work-packages included in the Master Control Network against each major item were taken and were drawn to time scale, in the form of a Bar Chart. The Bar Chart so drawn showed the commencement and the completion dates in respect of each work package. These dates were derived from the earliest and the latest Event Times as indicated in the Master Control Network. Thus, the time-schedule prepared this way was based on a rational method and not on ad hoc assumptions.

The Bar Chart was then divided into the financial years to identify the quantum of work involved against each item in respect of each financial year. Thereafter for executing the works under each year, costs were added. The summation of the costs vertically, in respect of each year was made, to obtain the estimated costs for each financial year and also the total project/cost. Obviously, these cost figures constituted the year-wise budget for the whole scheme, commencing from August, 1970 and spreading over for a period of about four years. The Bar Chart is shown in Annexure I-C.

Performance Budget : Based on the data contained in the Bar Chart, a Performance Budget for the whole scheme was prepared. This performance budget indicated the budget for the current year as well as the budget figures for the future years, upto the completion date of the project. In addition to the budget figures in respect of each year, the percentages of progress to be achieved against each year in physical terms, have also been worked out giving certain weightages for the work, to be executed. The Performance Budget proforma also included the percentage of physical progress to be achieved in each year. A correlation was therefore, obtained between the financial requirement for each year and the corresponding physical progress. This Performance Budget, therefore, became a time-cost schedule for the entire project. The Performance Budget so prepared for the scheme is at Annexure I-D.

Performance Control Schedule : A proforma has been evolved for Performance Control and is shown at Annexure I-E. This showed the original total estimated cost

for each component as derived fron the Bar Chart and the corresponding physical progress to be achieved in terms of percentage of the entire project. It indicated the budget cost and the corresponding physical achievement for the current year. In order to compare these planned costs and physical progress with the corresponding achievement, the actual expenditure during the current financial year and the actual physical progress achieved during the year are expected to be shown in this statement, through a reporting system, based on the Network Technique. By comparing the estimated costs and performances with the actuals, the corresponding variances can be found out for the current year and recorded in the relevant columns of the proforma.

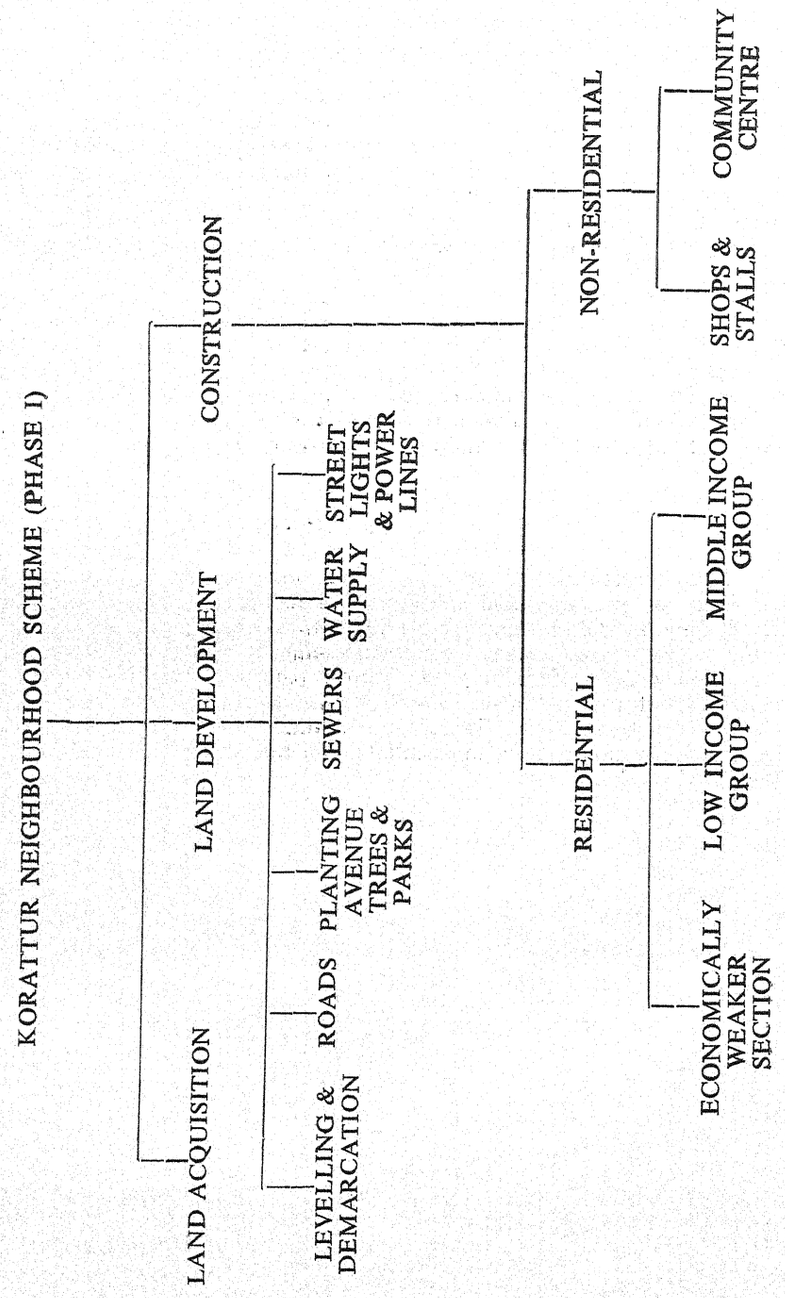
As the Network facilitates assessment of the time-schedule for the works to be performed during the next financial year and the corresponding physical progress, these can be assessed and included in the statement. Another significant advantage of applying the Network Technique to evolve Performance Budget is that it is possible to project in the Network to obtain the revised total cost and the revised total project schedule and their variances. These can be assessed on every progress review date and recorded in the relevant columns wherever cost overruns and schedule slippages occur. By taking timely corrective action, it is possible to have effective control over time and cost to achieve the time and cost objectives of the project.

CONCLUSION

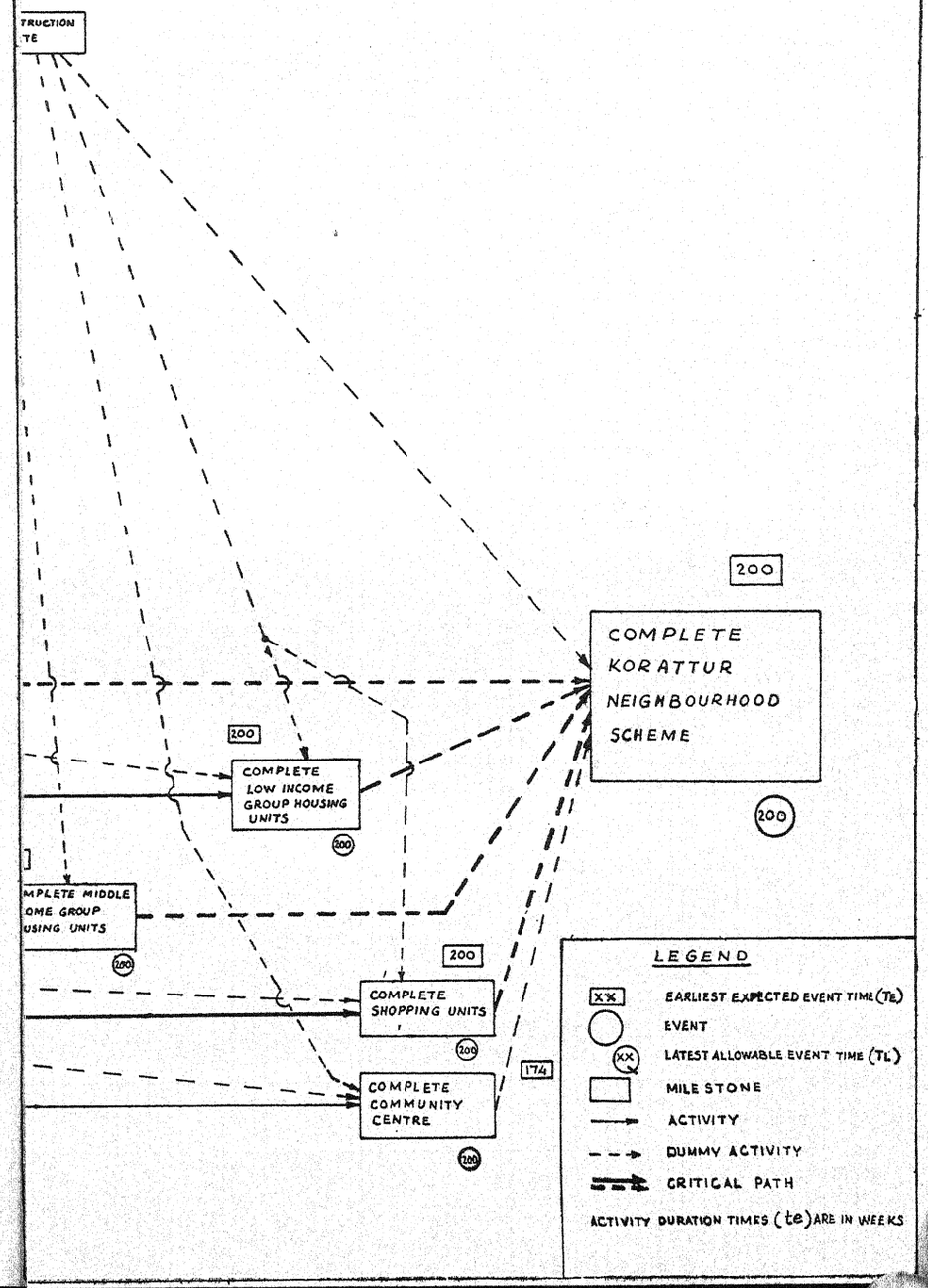
Notwithstanding the advantages that could be derived by using the Network technique for planning and scheduling of the works of this project, benefit will be drived only by taking timely corrective action on every progress review date, based on the actual progress made. It needs updating of the Networks, periodically, on every review date, identifying the critical path periodically and preparing revised schedules and cost estimates, which exercise has to be carried out throughout the entire construction period. Therefore, in addition to evolving a performance budget, vigorous follow-up action is an essential factor that should be carried out to achieve the desired results.

ANNEXURE I-A

WORK BREAKDOWN STRUCTURE



ANNEXURE I-B



ANNEXURE I-D

PERFORMANCE BUDGET (SUMMARY)

KORATTUR NEIGHBOURHOOD SCHEME—TAMIL NADU HOUSING BOARD

(All Cost Rs. in Lakhs)

	Work Breakdown Structure	*Original Estimated Cost (From Bar Chart)*	*Physical Percentage of each Component in relation to total project*	*Budget*									
				1970-71		*1971-72*		*1972-73*		*1973-74*		*1974-75*	
				Estimated	*Physical*	*Estimated*	*Physical*	*Estimated*	*Physical*	*Estimated*	*Physical*	*Estimated*	*Physical*
				Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%
LAND DEVELOPMENT	Contour and Levelling	6.0	1	6.0	1.0	—	—	—	—	—	—	...	...
	Roads	26.96	10	1.40	2.0	8.96	2.0	5.00	3.0	11.60	3.0	...	...
	Sewerage	22.50	10	...	2.0	8.20	3.5	10.10	2.5	4.20	2.0	...	...
	Water Supply	18.00	10	...	1.0	7.00	4.0	10.30	4.0	0.70	1.0	...	...
	Power Supply	3.00	5	...	...	0.50	2.0	2.50	2.0	...	1.0	...	...
CONSTRUCTION	Economically Weaker Section	12.91	11	...	...	1.33	2.0	7.78	5.0	3.40	4.0	0.40	...
	Low Income Group	56.94	20	...	...	5.22	4.0	28.34	10.0	22.38	6.0	1.00	...
	Middle Income Group	71.29	30	...	...	7.13	6.0	37.87	15.0	25.29	9.0	1.00	...
	Shops and Stalls	6.00	2	...	...	1.80	0.5	2.00	1.0	2.00	0.5	0.20	...
	Community Centre	2.00	1	...	...	1.00	0.5	1.00	0.5	...	...	...	...
	TOTAL	225.60	100	7.40	6.0	41.14	24.5	104.89	43.0	69.57	26.5	2.60	...

NOTE : The above is a broad overall budget. The performance budget could be prepared in greater detail for one year or for a shorter period with future projections.

ANNEXURE I-E

PROJECT PERFORMANCE CONTROL SCHEDULE

KORATTUR NEIGHBOURHOOD—PHASE I

Date of Report 31-3-71

(Rs. in Lakhs)

Work Breakdown Structure	*Original Estimated Cost of Each Component (from Bar Chart)*	*Physical percentage of each Component in Relation to the Total Project*	*Estimated 1970-71*		*Actual 1970-71*		*Variance 1970-71*		*Projected Time-Cost Schedule*						*Remarks*
									1971-72		*Revised Total Project Cost*	*Revised Total Project Schedule*	*Variance in Total Project Cost—& Cost Overrun + Cost under-run (—)*	*Variance in Total Project Schedule—Ahead of Schedule (+) Behind Schedule (—)*	
			Estimated Exp. (Budget during the year 70-71)	*Estimated Physical Progress During the Financial Year 1970-71*	*Actual Expenditure During the Financial year 1970-71 (Through Progress Reports)*	*Actual Physical Progress During the year 1970-71 (Through Progress Reports)*	*Variance in Expenditure During the Year (+) or (—)*	*Variance in Physical Progress (+) or (—)*	*Estimated Expenditure During 1971-72*	*Estimated Physical Progress During 1971-72*					
	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	Rs.	%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Contour & Levelling	6.00	1	6.00	1					—	—					
Roads	26.96	10	1.40	2					8.96	2					
Sewerage	22.50	10	—	2					8.20	3.5					
Water Supply	18.00	10	—	1					7.00	4					
Power Supply	3.00	5	—	—					0.50	2					
Economically Weaker Section	12.91	11	—	—					1.33	2					
Low Income Group	56.94	20	—	—					5.22	4					
Middle Income Gr.	71.29	30	—	—					7.13	6					
Shops	6.00	2	—	—					1.80	0.5					
Community Centre	2.00	1	—	—					1.00	0.5					
Total	225.60	100	7.40	6					41.14	24.5					

NOTE—1. The above format could be suitably amplified for review monthly or quarterly.

2. Data incomplete

8

Programme and Performance Budgeting in the Indian Context

It was the Hoover Commission that officially coined a new term, 'performance budget', for the first time, when they recommended that "the whole budgetary concept of the Federal Government (U. S. A.) should be refashioned by the adoption of a budget based on functions, activities and projects: this we designate a 'performance budget'."[1] The subsequent budgetary reforms in the U.S.A. and elsewhere under the label 'performance budgeting', however, had their antecedents in budget practices dating back for many years in some of the federal departments, local and city administrations in the U.S.A. The earlier developments in federal, state and local budgeting, particularly in the Navy Department and later in the Department of Defence, seem to have influenced the thinking of the Hoover Commission. Some of the characteristics of the technique of performance budgeting were discernible in what used to be practised under such terms as 'cost-data' budgets, 'project' budgets and 'programme' budgets by some state and local Governments in the U. S. A. Nevertheless, the Hoover Commission gave the first major stimulus for advances towards more rational budget systems.[2]

The concept of performance budgeting with its emphasis on a budget classification in terms of what the Government *does* rather than what the Government *buys*, with the shift in the importance from the means of accomplishment to the accomplishment itself and with its primary focus on programmes, activities and projects, their costs and quantitative data establishing a relationship between financial outlays and physical achievements, had an immediate impact on many countries, particularly those having economic development plans. As pointed out by the Hoover Commission, "the all important thing in budgeting is the work or the service to be accomplished and what that work or service will cost". In

[1]The Commission on the Organisation of the Executive Branch of the Government (Chairman: Herbert Hoover), *Budgeting and Accounting*, Washington, 1949.

[2]Jesse Burkhead, 'Government Budgeting', John Wiley and Sons, New York, 1956, pp. 133-139.

essence, it is a financial and work plan with the financial and physical aspects of every programme or activity closely interwoven with a view to establishing a meaningful relationship between inputs and outputs or costs and results. Though the Hoover Commission's thinking on the subject was shaped by its concern for more effective review by the Congress, the concept was undoubtedly a significant step in bringing out the managerial aspects in government budgeting. It was a departure from the 'conventional' budget which, with its traditional object or line-item classification, primarily revealed what Government purchases but not *why*. The functional and programme type classification under performance budgeting not only shows the objects of purchase but also highlights what the Government is doing in terms of its programmes, activities, and projects, how much it is doing, at what cost and with what results.

DEVELOPMENTS IN INDIA

Outside the U.S.A., one of the first countries to adopt performance budgeting was Philippines. It did not take long before the concept had its echo in India too. One of the earlier developments was a recommendation in the 20th Report[3] of the Estimates Committee of the second Lok Sabha that "performance budgeting should be the goal which should be reached gradually and by progressive stages . . ." The Committee had also recommended (paras 25-26 of the Report) that industrial undertakings should prepare performance-cum-programme statements as also business-type budgets. These recommendations were reiterated in the Committee's 60th[4] and 73rd Reports.[5] Though these rccommendations were noted by the Government of India, there was no real progress until 1965 when a small unit in the Planning Commission undertook pioneering case studies with a view to considering the adaptability of the technique of performance budgeting in India. It is significant to note that these studies were undertaken to find out the feasibility of the technique under conditions and institutional fremework in India. This was done out of the realisation that what is being done elsewhere cannot be transplanted without studying the structure and facilities obtaining here. Later, the Working Group on Performance Budgeting set up by the Study Team on Financial Administration of the Administrative Reforms Commission appoined by the Government of India made detailed studies and submitted a Report on the feasibility of the Introduction of performance budgeting in India. The Administrative Reforms Commission endorsed the Report of the Working Group and recommended that the Departments and Organisations which are in direct charge of development programmes, both at the Centre and in the States, should introduce performance budgeting. They also outlined the approach and the format.[6] The acceptance by the Government of India of this major recommendation was a milestone in the budgetary history of the country.

[3]20th Report of the Estimates Committee, 1957-58 (2nd Lok Sabha) on Budgetary Reforms, New Delhi, Lok Sabha Secretariat, 1959, paras 21-22, p. 12.

[4]60th Report of the Estimates Committee, 1958-59 (2nd Lok Sabha) on *Budgetary Reforms*, New Delhi, Lok Sabha Secretariat, 1959, Chapter IV, items 11, 13 and 14; pp. 34, 35 and 37.

[5]73rd Report of the Estimates Committee, 1959-60 (2nd Lok Sabha) on *Preparation of Bndget Estimates of Public Undertakings and Presentation of their Annual Reports and Accounts to Parliament*, New Delhi, Lok Sabha Secretariat, 1969, Chapter II, Paras 3 & 4, pp. 3 & 4.

[6]Report of the Working Group on Performance Budgeting contained as 'Accompanyment B' in the *Report of the Administrative Reforms Commission's Study Team on Financial Administration*, New Delhi, Manager of Publications, Government of India, 1967 and Administrative Reforms Commission's Report on *Finance, Accounts and Audit*, New Delhi, Manager of Publications; Government of India, 1968.

Today, in India, performance budget documents of a number of departments and organisations are being prepared not only by the Central Government but also by some State Governments as well. (See Annexure to Chapter 9). Commencing from 1968-69, more and more organisations are being added every year. These performance budgets are now being presented to the Parliament and State Legislatures as post-budget supplementary documents, pending the required accounting: support and other necessary changes in the financial nanagement practices.

PERSPECTIVE

From the point of view of an ideal performance budget, either as a document of utility to Parliament/State Legislatures for review and control, or as a means by which the management could watch the implementation and progress of the several programmes and projects, the attempts made so far leave much to be desired. Very often doubts have been raised as to the very purpose in preparing these performance budgets, which, to many, appear nothing more than a re-arrangement of data appearing elsewhere. "Old wine in new bottle" is one of the usual criticism made. Though there is some point in what they say, the sweeping criticism is on account of a lack of understanding of the evolutionary nature of the technique and the inevitable limitations during the intitial stages. Apart from the need for educating and training the officers at various levels, the three basic inter-related considerations in the introduction of the technique cannot be brought into full play in a short span of time. Though a meaningful classification structure in terms of programmes, activities and projects with reference to the objectives could be drawn up for each department or organisation with relative ease, the real difficulty arises in trying to evolve suitable units of work measurement and in developing appropriate methods for the physical measurement of work. Data generation takes time; so also the developments of suitable norms and standatds. Physical measurement of work or services may pose problems, as not all governmental activities are susceptible of quantification in a meaningful manner. The changes in the financial management system and practices, particularly in the field of accounting and reporting, are also bound to take time.

Though a modest beginning has been made to improve the quality of some of the performance budgets, much remains to be done in appreciating the technique as a control tool in the hands of management, in developing more useful performance budgets that will inter-relate financial and physical plans and in making them real operational documents for control appropriate to each level of management. There is no follow-up action at all to ensure that things are happening as planned and indicated in the performance budgets. Reporting is generally ineffective. Unless these are recognised and steps taken systematically, the supplementary exercise now being done will be of no avail.

ACCOUNTING TEAM

One important and positive step taken by the Government of India needs special mention here. A Team of senior officers was appointed in March 1969 to go into the accounting and connected matters that have a vital bearing on the success of performance budgeting. The recommendations of the A.R.C. in this regard have been referred to this Team for suggesting the necessary changes. One of their

tasks is to streamline the existing accounting and budgetary heads along functional and programme lines. The Team has made considerable progress towards rationalising the heads of account so as to bring about an integrated accounting and budgetary structure fully reflecting the functions of Government and the programmes and activities of the various departments and organisations in addition to depicting the organisational units and objects of expenditure. The work of the Team is expected to be completed shortly. When their recommendations are accepted, performance budgeting movement will get the much needed support and stimulus. If the accounting and budgetary base is rationalised to generate data in terms of activities, projects and programme, bulk of the work in developing performance budgeting could be said to have been completed. With a proper classification structure, it should be relatively easier to move forward gradually towards work measurement, until cost data, standards and so on. Organisational and procedural improvements can also be brought about by and by in order to enable the executive realise the full benefits of performance budgeting as an aid in managerial performance.

PROGRAMME AND PERFORMANCE BUDGETING

It is necessary at this stage to be clear about what we in India mean by performance budgeting as accepted and practised today. The Working Group on Performance Budgeting (set up by the Administrative Reforms Commission), which was influenced by the Report of the Hoover Commission and the Manual for Programme and Performance Budgeting published by the United Nations, had used the term 'performance budget' to mean a *programme and performance budget*. They did not consider it necessary to make a fine distinction between a programme budget and a performance budget as has been made out by some authorities on the subject. Initially when the term performance budget was evolved by the Hoover Commission, its Task Force did not seem to make any distinction between a programme and a performance budget. The United Nations Manual on the subject uses the term 'programme and performance budgeting' as comprehensive to cover not only broad programme classification at higher levels, but also detailed performance classification and work measurement techniques at lower levels for managerial control. Dealing with this subject, the Manual points out that ". . . a useful distinction might be made between programme budgeting and performance budgeting. In programme budgeting, the principal emphasis is on a budget classification in which functions, programmes and their subdivisions are established for each agency, and these are related to accurate and meaningful financial data. Performance budgeting involves the development of more refined management tools, such as units cost, work measurement and performance standards. Of course, the measurement of work, both in a physical and financial sense, presumes an already formulated set of work units which can be derived only when programmes and their subdivisions are first established. In this sense, performance budgeting is an all-inclusive concept embodying programme formulation as well as measurement of the performance work in the accomplishment of programme objectives."[7] Thus it may be seen that though a distinction is made between a programme budget and a performance budget, yet for all purposes, the technique of Performance Budgeting, so forcefully expounded in the Manual, really embraces the broad classification aspects for higher levels and the detailed performance unit break up for measurement at lower levels. *In India too, the term performance budgeting has been accepted as an all-inclusive concept in the above sense.*

[7]A Manual for Programme and Performance Budgeting, United Nations, Department of Economic and Social Affairs, New York, 1965, p. 3.

In the initial stages of the development of performance budgeting in the 1950s, the term programme budget had a different connotation from what it has acquired today. Jesse Burkhead has nicely brought out the distinction as understood then. There was a tendency during that period to make programme budget and performance budget synonymous terms, though the scope of each was considered different, if viewed independently. According to Burkhead, a programme budget might stop with broad programme costs and it need not be extended to or built on performance units. A programme budget, according to him, serves a different purpose than a performance budget. "A programme budget is useful for review and decision making at and above the departmental level. It is adapted to the requirements of overall budgetary planning—to Central budget office review, review by the chief executive and by the legislature. The performance budget may also provide useful information for review, but in addition, it must serve management purposes at and below the departmental level. Performance classification and analysis seek to measure the cost and accomplishment of detailed activities, and by so doing, improve the implementation of programmes."[8]

The Working Group on Performance Budgeting had borne in mind these distinctions between a programme budget and a performance budget while recommending the introduction of performance budgeting in India. As mentioned earlier, this term has been used throughout their Report to mean a *programme and performance budget* and it is in this sense the technique is being developed in India today.

SCOPE OF PERFORMANCE BUDGETING

There is also another area of confusion. It is often suggested that cost-benefit analysis, related investment planning and evaluation and other systems approach to management should be treated as an integral part of performance budgeting. The Working Group had taken a note of this aspect also. While not denying either the merits or the need for such analytical studies, they had made a distinction between what is basically administrative planning and the purely budgetary process. In other words, while cost-benefit analysis or other useful managerial techniques should be an integral part of the administrative planning process and should also form a necessary adjunct to the formulation and appraisal of programmes and activities in the annual budgetary decision making, these are not part of the technique of performance budgeting. However, to the extent these analytical techniques are not developed and applied, the utility of performance budgeting could be considerably diminished. Thus, while moving towards performance budgeting in India, it is expected that tools for administrative decision making will be sharpened by the increasing use of new managerial techniques gradually. The introduction of performance budgeting in India has not been made conditional on the availability or development of these facilities. Moreover, in India, in the planning process and in the selection of projects and programmes, cost benefit and such other analytical studies are being made wherever they are feasible or practicable. Major schemes and projects are selected, by and large, only after considering their costs, their benefits and the alternative available. To the extent they are wanting, steps will have to be taken to develop these techniques so that selection of programmes and projects is

[8]Jesse Burkhead, "Government Budgeting", John Wiley and Sons, New York, 1956, pp. 139-140.

done on a rational basis. When once the programmes and projects are decided, whether in the conventional manner or by the application of systems studies, the technique of performance budgeting, as understood and applied in India, only ensures their implementation according to the targets set or plan of action laid down. In other words, the technique of performance budgeting is conceived more as a device for managerial decision making and control at the stage of implementation rather than as a means for top level planning. It is, however, not to suggest that performance budgeting will not be of any use for higher level planning and decision making. It certainly helps, as the functional, programme and performance classification provides much needed data for determining priorities, allocating resources and overseeing implementation.

PPBS AND PERFORMANCE BUDGETING

Again, performance budgeting as adopted in India is not the same thing as the Planning Programming and Budgeting System (PPBS) or what is generally called 'programme budgeting' that has been developed in the U.S.A. and elsewhere. The terminological confusion has acquired a new dimension and now. It is understood from the various publications and reports on the subject that the term 'programme budgeting' as understood now in the United States suggests different meanings to different people. "To Novick it has a very wide meaning which includes searching analysis of alternatives and information reporting systems. To Charles J. Hitch, another pioneer of PPBS, who as comptroller in the Department of Defence was responsible for implementing it, programme budgeting relates to that part of the system which produces a budget classified by outputs, and which extends far enough into the future to indicate the full implications of programmed outputs. The second and a quite distinct part of the system consists of techniques of cost benefit analysis."[9] Performance budgets are some times called programme budgets, but "this is misleading because. . . they (performance budgets) concentrate upon the measurement of performance against costs as an aid to regular management control."[9] The term programme budgeting could be distinguished from performance budgeting in yet another way. In the case of the latter, "there is emphasis upon workloads and work standards related to immediate outputs, rather than to criteria of effectiveness on the one hand or detailed lists of expenditure headings on the other. If programme budgeting provides for 'efficiency in the large', performance budgeting aims at efficiency in the small.[9]"

The concept of PPBS or programme budgeting has two important components—a programme budget and systems analysis. The purpose of the system is to provide for more and better information for decision making and allocation of resources. It seeks to focus attention on alternative means to achieve carefully defined goals and objectives, specifying the total costs and benefits of each alternative. The special feature of the concept is the technique of long range planning and programming which is brought into the whole process of budget making. As in the case of performance budgeting, PPBS also relies on a classification structure in terms of programme categories, sub-categories, programme elements and so on. They are what are called objective or output-oriented classification. Though they appear to be somewhat on the lines of performance budgeting, they are not the same. The

[9]K.E. Rose, "Program Budgeting", The Institute of Municipal Treasurers and Accountants, London, September 1969, pp. 10-11.

objective or output oriented programme structure under PPBS is along goals and objectives in a larger sense, cutting across organisations. In performance budgeting, the classification by programmes and activities is established for each department or organisation in relation to its functions. Here, the classification goes down to lowest operating levels for work measurement and appraisal. Programme budgeting or PPBS may appear to have some of the characteristics of performance budgeting, but the two are not the same. PPBS is more for planners and analysts than for management, whereas performance budgeting is more for management. Conventional object-oriented budgets are more useful for financial and legal accountability than for management.

Having regard to the institutional framework obtaining in this country and the built-in long term and short term planning process here, and also taking into account the stage of development and the specific purposes sought to be served by an improved budgetary system in our context, it was not considered necessary at the moment to go in for PPBS in India. The needs of accountability, financial control, management review, control and decision making could be adequately served by fully developing the potentialities of the technique of performance budgeting as well as the conventional budget and by improving our systems in general, without complicating the matter by falling in for attractive catch words. If only we could make our long term and short term plans more realistic with correct estimating of projects and schemes, include them in the Plan and in the budget only after their full costs and benefits are carefully considered by the use of analytical techniques like cost-benefit analysis, etc., look at them over a longer horizon, improve our review and appraisal system through better reporting, streamline and strengthen our financial control practices, cut delays in sanctions and more towards a rolling plan, we will be realising most of the purposes of PPBS without calling it as such. In fact, it is gathered that even in the U.S.A., they have not been able to successfully implement PPBS over a wide area. There are a number of variations from this concept and different countries have started experimenting with the underlying principle behind the PPBS or programme budgeting in their own way. 'Output budgeting' as is being developed in the United Kingdom is more or less on the pattern of the American Programme Budgeting, though the emphasis and the scope may be different.

OUR APPROACH

To sum up, what is being done in India by way of budgetary reforms is to retain all the virtues of the conventional budget while improving its utility in the context of the present day developmental requirements by gradually imbibing the good features of the programme and performance budgeting technique. No system is an end by itself nor is it a solution to the administrative deficiencies. It has been accepted that performance budgeting offers great potentialities as a management aid. Together with the financial control and accountability aspects of the conventional structure, the technique of performance budgeting promises better decision making and control. However, it is only a tool and the tool will be effective only if it is made proper use of. No technique is a substitute for management. The technique of performance budgeting has to be developed in India with this in mind.

In the gradual application of this technique, priority should be given to major projects, public undertakings and departments/organisations having developmental

programmes. Normal administrative services may have low priority, as the utility of performance budgeting is less apparent in their case. In respect of capital projects, performance budgeting could be really effective, if modern planning and scheduling techniques like PERT/CPM (Network analysis) are increasingly made use of to have realistic cost schedules in relation to the physical plan. Also, along with performance budgeting, we should improve our allocation and decision making techniques.

9

Installation of Performance Budgeting—Some Basic Issues

While accepting the recommendation of the Administrative Reforms Commission regarding performance budgeting, the Government of India decided to introduce the new technique in a gradual manner to cover all developmental departments and organisations as early as possible, without fixing any deadline for this purpose. Some of the State Governments have also accepted the need for performance budgeting. Accordingly, performance budgets of a number of Ministries/Departments and Organisations at the Centre and a few departments and organisations in nine States are now being prepared and presented to the Parliament/State Legislatures*. More departments at the centre are likely to be covered soon. Similarly, more State Governments are expected to go in for performance budgeting in the years to come.

LIMITATIONS OF WORK DONE

The efforts of the Central Government and the State Governments have so far been directed mainly to the preparation of performance budget documents by conversion of the figures in the existing Demands for Grants into a new format as a post-budget exercise. They supplement the traditional budgets. Apart from the inadequacies of data regarding targets, achievements, norms and other relevant performance indicators, the question is whether we can say that in the departments and organisations covered so far, performance budgeting has been *really introduced.* The answer is a definite no. Mere conversion of facts and figures into a new format is only the beginning of a long journey. The performance budgets being prepared are summary documents mainly meant for the information of the Parliament/State Legislatures. From the point of view of a desirable budget, either as a document of

*A list of Ministries/Departments and organisations at the centre and states whose performance budgets are being prepared, is given at the end of this chapter as an Annexure. Information regarding states could not be had in full inspite of efforts.

utility to Parliament/State Legislatures for review and control, or as a means by which the management could watch the implementation and progress of the several programmes and project, the attempts made so far leave much to be desired.*

Though it is desirable to cover all developmental departments as early as possible, one should not forget that this is not an end by itself. In fact, instead of adding to the numbers of departments, it would be desirable to stop this process for the time being and consolidate the position in those organisations where performance budgets have already been prepared.

SOME SUGGESTIONS FOR ACTION

The following are some of the important issues that need to be attended to and the line of action that may be taken in developing a system for performance budgeting in those departments, where a beginning has already been made with the preparation of summary performance budgets.

(*a*) Working Groups† may be constituted in each department consisting of the Secretary/Head of the Department, two or three senior and middle level executive officers, budget and finance officers/I.F.A. of the department and a senior officer of the Finance Ministry/Department dealing with the concerned administrative department. It should be the job of this group to meet periodically and discuss not only the adequacy of the new classification structure and the usefulness of data in the performance budget, but also to take measures for *necessary follow up action*. The Group will have to set guidelines for generating the needed data from the field units, designing appropriate performance budget formats suited to each level and for setting norms and standards. They should also evolve a machinery for reviewing the financial and physical progress *vis-a-vis* the plan of action and targets set out in the performance budgets. Work measurement problems should be considered and satisfactory methods of quantification of work developed.

(*d*) The Working Group should examine the prevailing financial control system and procedures with a view to seeing to what extent it impedes progress. They will have to consider removal of practical difficulties in the operation of existing procedures and practices and take steps to ensure greater coordination of efforts.

(*c*) The Group should also examine the organisational set-up in the department and consider measures to make it more efficient. Responsibility at each level should be specific and overlapping eliminated. At each level, responsibility should be clear, and commensurate with the responsibility, adequate administrative and financial powers should also be bestowed on them. The entire scheme of delegations should be reviewed for this purpose.

(*d*) The Working Group should consider steps to improve the accounting competence at the level of each controlling officer. Steps should be taken to maintain proper accounts internally so that management at each level gets timely data from accounts in respect of the financial progress of the

*See also chapter 8.

†Some time ago, Working Groups were required to be constituted in the various ministries of the Government of India. However, these Working Groups do not appear to be functioning effectively.

programmes and projects. A system of internal audit and appraisal should also be built up gradually.

(*e*) The Working Group should examine the prevailing reporting system and take measures to strengthen it as performance budgeting needs to be sustained by an effective information and reporting system suited for each level of management (Discussed in Chapter 6).

(*f*) In addition to the steps that may be considered by the Working Groups, the Ministry of Finance/Department of Finance should also examine the existing system of financial control with a view to sharing their powers and responsibilities with the administrative department. In other words, the scheme of delegation of powers should be such that, consistent with the need for overall control by Finance, the administrative departments and Heads of Departments should have greater freedom of action which is vital in the context of wider accountability of executive under performance budgeting. Delays in sanctions impede progress and adversely affect performance. The Government of India have already initiated a number of measures for greater delegation. More needs to be done to make it effective and purposeful.

(*g*) The Administrative departments should be fully involved in the budget formulation, and when their proposals are finally considerd by Finance, they should invariably be associated to the fullest extent and taken into confidence. This is not the case now in most of the States and even the Centre. In other words, the Administrative Departments should have the feeling of involvement throughout. If this is done, the administrative departments cannot put the blame on Finance for arbitrary cuts or shortfalls in performance, as they would have been fully consulted and afforded opportunity to re-schedule their plans.

(*h*) The system should be such that the proposals from Administrative Departments reach the Finance Departments sufficiently early, so that enough time is available for Finance to scrutinise them before inclusion in the budget. If this is done, there should ordinarily be no necessity for the Administrative Departments to approach Finance for sanctions before going ahead with their programmes. Pre-budget scrutiny should be detailed and complete. No budget proposals should ordinarily be included in the budget, unless they have been examined in detail by the Finance. Allocation of funds and their distribution to various spending authorities should also be done with the least possible delay after the budget is passed.

(*i*) It will also be necessary to speed up the finalisation of the Annual Plan process in consultation with the Finance and Administrative Ministries/Departments of the Centre/States, so that *firm* plan proposals as accepted are known well in time for their translation into the budgets faithfully.

(*j*) Every department and organisation should plan their activities well in advance and should have a programme of action not only for the budget year but also for a few years ahead. Unless there is such an advance planning and programming, operational plans and the budget for each year cannot be worked out in time. The financial and physical plans should be such that they present a series of alternatives to suit the availability of resources.

(*k*) As far as possible, modern techniques of management decision making should be increasingly applied. Programmes, activities and projects should be selected on a careful analysis of the costs and benefits of competing activities or projects and the most optimum selected. Performance budgeting comes in handy for management to watch the implementation of their projects or programmes, after careful administrative planning and analysis have gone into their selection. To the extent such planning and analysis is lacking, performance budgeting by itself will not ensure efficiency and economy in the utilisation of resources.

(*l*) As mentioned earlier, performance budgets are today presented as supplementary documents. This is so because the required accounting support is wanting. The budgetory and accounting heads need to be rationalised along functions, programmes, activities and projects. The structure and contents of the Demands for Grants also need to be streamlined. For too many details now appear in the budget. They need to be simplified and rationalised. As referred to earlier, these aspects have been referred to a Team of Officers set up by the Government of India. When once their recommendations are accepted and implemented, more than 50 per cent of the job may be said to be over. It would then be possible to do away with the supplementary exercise now being done and the performance budgets would get integrated with the Demands for Grants (as rationalised). Recommendations of the Team of Officers on this and allied issues are awaited.*

(*m*) The Government of India are committed to performance budgeting. It is, therefore, very necessary that adequate top-level support is provided in full measure. Without the active backing from the top, the results are bound to be disappointing. The same is true of the State Governments. Parliament has been informed of the Government's acceptance of the recommendations of the Administrative Reforms Commission on performance budgeting and allied issues. The movement will get a fillip, if Parliament/State Legislatures and their Financial Commitees evince keen interest in the proper implementation of the relevant recommendations.

(*n*) Above all, performance budgeting is only one of the aids to management. It does not by itself solve any problem. The success of any such tool depends on how wisely and enthusiastically informed management makes use of them. Performance budgets will aid management only if they are introduced and developed for their use *at each level*. Budgets on a performance basis will have to be prepared from the *lowest level*, built up, reviewed and consolidated at each successive higher levels. Summary performance budgets of the type prepared now are only for information of the Parliament/State Legislature; they are not operational tools for the manager, supervisor or the implementing official. Determined training efforts are needed to educate all officials in the hierarchy so that they are enabled to prepare and make use of performance budgets suited to their needs.

(*o*) Lastly, there is urgent need to have a full-fledged and well-manned unit in the Ministry of Finance (Budget Division) to assume the role of motivator, coordinator and trainer assigned to it by the Administrative Reforms Commission. At present, it is understood that no such unit with whole time officers is functioning in the Ministry of Finance. Among other things, the

*See also Chapter 3.

Ministry of Finance should review the performance budgets being prepared now, identify their deficiencies and give suitable guidelines to the administrative Ministries/Departments. They should also find out why these performance budgets have failed to evoke sufficient interest in the top level, why top level officers are not impressed about their utility and how they could be improved and made meaningful and useful. The utility of performance budgets should be brought home to the top level, and only then, they will take active interest to go in whole heartedly for it.

ANNEXURE

LIST SHOWING NAMES OF CENTRAL AND STATE ORGANISATIONS WHOSE PERFORMANCE BUDGETS ARE BEING PREPARED

A—GOVERNMENT OF INDIA

1968-69 (4 Ministries; 8 departments/organisations) :

1. Ministry of Communications
   (*a*) Posts & Telegraphs Department (Capital Outlay)
   (*b*) Overseas Communications Service
   (*c*) The Monitoring Organisation
   (*d*) Wireless Planning and Coordination Wing
2. Ministry of Health, Family Planning & Urban Development
   (*a*) Department of Family Planning
3. Ministry of Transport and Shipping
4. Ministry of Works, Housing & Supply
   (*a*) Central Public Works Department
   (*b*) Chief Controller of Printing and Stationery

1969-70 (6 Ministries; 13 Departments/Organisations) :

1. Ministry of Irrigation & Power
2. Department of Food (Ministry of Agriculture)
3. Ministry of Communications
   (*a*) Posts & Telegraphs Department (Capital Outlay and Working Expenses)
   (*b*) Overseas Communications Service
   (*c*) The Monitoring Organisation
   (*d*) Wireless Planning and Coordination Wing
4. Ministry of Health, Family Planning, Works, Housing and Urban Development
   (*a*) Department of Health
   (*b*) Department of Family Planning

   (*c*) Central Public Works Department
   (*d*) Chief Controller of Printing & Stationery
5. Ministry of Shipping and Transport
6. Ministry of Tourism and Civil Aviation
   (*a*) Department of Civil Aviation
   (*b*) India Meteorological Department

1970-71 (7 Ministries; 21 Departments/Organisations) :

1. Ministry of Labour, Employment and Rehabilitation
   (*a*) Department of Labour and Employment
   (*b*) Directorate General of Labour and Employment
2. Department of Agriculture (Ministry of Agriculture)
   (*a*) Exploratory Tube Wells Organisation
   (*b*) Indo-Norwegian Project, Ernakulam
   (*c*) Deep Sea Fishing Organisation, Bombay
   (*d*) Central Institute of Fisheries Education, Bombay
   (*e*) Delhi Milk Scheme
   (*f*) National Seeds Corporation
3. Department of Food (Ministry of Agriculture)
4. Ministry of Irrigation & Power
5. Posts & Telegraphs Department (Ministry of Communications)
6. Ministry of Communications (Other than Posts & Telegraphs)
   (*a*) Overseas Communications Service
   (*b*) The Monitoring Organisation
   (*c*) Wireless Planning and Coordination Wing
7. Ministry of Health, Family Planning, Works, Housing and Urban Development
   (*a*) Central Public Works Department
   (*b*) Chief Controller of Printing and Stationery
   (*c*) Department of Health
   (*d*) Department of Family Planning

8. Ministry of Shipping and Transport

9. Ministry of Tourism and Civil Aviation

   (*a*) Department of Civil Aviation

   (*b*) India Meteorological Department

1971-72 (9 Ministries; 31 Departments/Organisations)

In addition to the *21* organisations and departments covered by 1970-71 (as listed under 1970-71), the following were *added.*

1. Department of Agriculture (Ministry of Agriculture)

   (*a*) Central Institute of Fisheries Operations, Cochin and Madras

   (*b*) Forest Research Institute and Colleges, Dehra Dun

   (*c*) Directorate of Plant Protection, Quarantine and Storage, Faridabad

   (*d*) Tractor Training and Testing Stations, Budni and Hissar (2 units)

2. Ministry of Foreign Trade

3. Ministry of Information and Broadcasting

   (*a*) Planning & Development Unit of All India Radio

   (*b*) Films Division

   (*c*) Directorate of Field Publicity

   (*d*) Photo Division

   (*e*) Film and Television Institute of India

1972-73 (10 Ministries; 33 Departments/Organisations)

The following *additional* organisations and departments are proposed to be covered during 1972-73 over and above those already being done :

1. Department of Tourism

2. Department of Mines and Metals (a few units)

B—STATE GOVERNMENTS

I. Bihar*

1971-72

1. Agriculture
2. Fisheries
3. State Lotteries
4. Tenughat Project

1972-73

Information not available

II. Kerala

1970-71

1. Public Works (Buildings & Roads)

1971-72

1. Public Works (Buildings & Roads)

1972-73

Information not available.

III. Maharashtra

1971-72 (2 Departments)

1. Irrigation and Power
2. Co-operation

1972-73 (2 Departments/5 Organisations)

1. Irrigation & Power†
2. Co-operation†
3. Agriculture

*In Hindi only

†Documents not received; presumed these were prepared as these have been covered in 1971-72.

4. Fisheries

5. Animal Husbandry

IV. MYSORE

1970-71

1. Department of Education and Youth Services

2. Department of Ports

1971-72 & 1972-73

Information not available

V. PUNJAB

1970-71 (3 Departments)

1. Family Planning

2. Transport

3. Public Works Department (Buildings & Roads)

1971-72 (12 Departments and Organisations)

1. Family Planning

2. Transport

3. Medical Department

4. Public Works Department (Buildings & Roads)

5. Public Works Department (Irrigation)

6. Public Works Department (Public Health)

7. Punjab State Small-Scale Industries Corporation Ltd.

8. Punjab Agro-Industries Corporation

1972-73 (12 Departments and Organisations)

1. Family Planning

2. Medical

3. Transport

4. Public Works Department (Buildings & Roads)

5. Public Works Department (Irrigation)

6. Public Works Department (Public Health)

7. Punjab State Small-Scale Industries Corporation Ltd.

8. Punjab Agro-Industries Corporation

9. Department of Agriculture

10 Department of Animal Husbandry

11. Co-operative Department

12. Punjab State Electricity Board

VI. RAJASTHAN

1970-71 (9 Departments/Organisations/Units)

1. Technical Education

2. Medical and Health Schemes (T.B. Control Programme, Malaria Eradication Programme and Family Planning Programme)

3. Public Health Engineering Department

4. Agriculture Department

5. Co-operative Department

6. Irrigation Department

7. Public Works Department (Buildings & Roads)

1971-72* (11 Departments/Organisations/Units)

1. Technical Education

2. Medical and Health Schemes (T. B. Control Programme, Employees State Insurance Scheme, Malaria Eradication Programme, Smallpox Eradication Programme and Family Planning Programme)

3 to 7—As in 1970-71

1972-73* (20 Departments/Organisations/Units)

1. Technical Education

*In Hindi only.

2. Medical and Health Schemes (In addition to those covered in 1971-72, 2 new programmes, *viz.*, Medical Colleges and attached Hospitals and Hospitals and Dispensaries including Primary Health Centres were added this year)

3 to 7—As in 1970-71

8. Animal Husbandry (including Fisheries)
9. Sheep and Wool Development
10. Forest Department
11. Industries Department (3 units)
12. Rajasthan Canal Project.

VII. TAMIL NADU

1970-71 (2 Organisations)

1. Directorate of Agriculture
2. Directorate of Transport

1971-72 (11 Organisations)

1. Directorate of Agriculture
2. Directorate of Transport
3. Directorate of Industries
4. Directorate of Fisheries
5. Directorate of Education (School, Collegiate and Technical)
6. Directorate of Health Services & Family Planning
7. Directorate of Medical Education
8. Directorate of Harijans Welfare
9. Directorate of Backward Classes

1972-73

Documents not received; presumed all the above organisations are continued. Additions, if any, are not known.

VIII. UTTAR PRADESH*

1970-71 (3 Departments)

1. Irrigation Department
2. Public Works Department (Buildings & Roads)
3. Family Planning

1971-72 (4 Departments)

1. Irrigation Department
2. Public Works Department (Buildings & Roads)
3. Family Planning
4. Industries Department.

1972-73 (6 Departments)

1. Irrigation Department
2. Public Works Department (Buildings & Roads)
3. Family Planning
4. Industries Department
5. Co-operation Department
6. Agriculture Department.

NOTE—Information about states not complete. It is possible there may be omissions or errors, though every care has been taken to prepare this list. It is understood that Andhra Pradesh has also made a beginning.

*In Hindi only.

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